





BRITISH HYDROID ZOOPHYTES.

VOL. II.

57
H. 58

A

HISTORY

OF THE

BRITISH HYDROID ZOOPHYTES.

BY

THOMAS HINCKS, B.A.

IN TWO VOLUMES.

VOL. II.—PLATES.

LONDON:

JOHN VAN VOORST, PATERNOSTER ROW.

MDCCCLXVIII.

"Treasures the vulgar in their scorn reject." - CRABBE.

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The magnified detail has in almost all cases been drawn by
the Author with the Camera lucida, to the same scale.

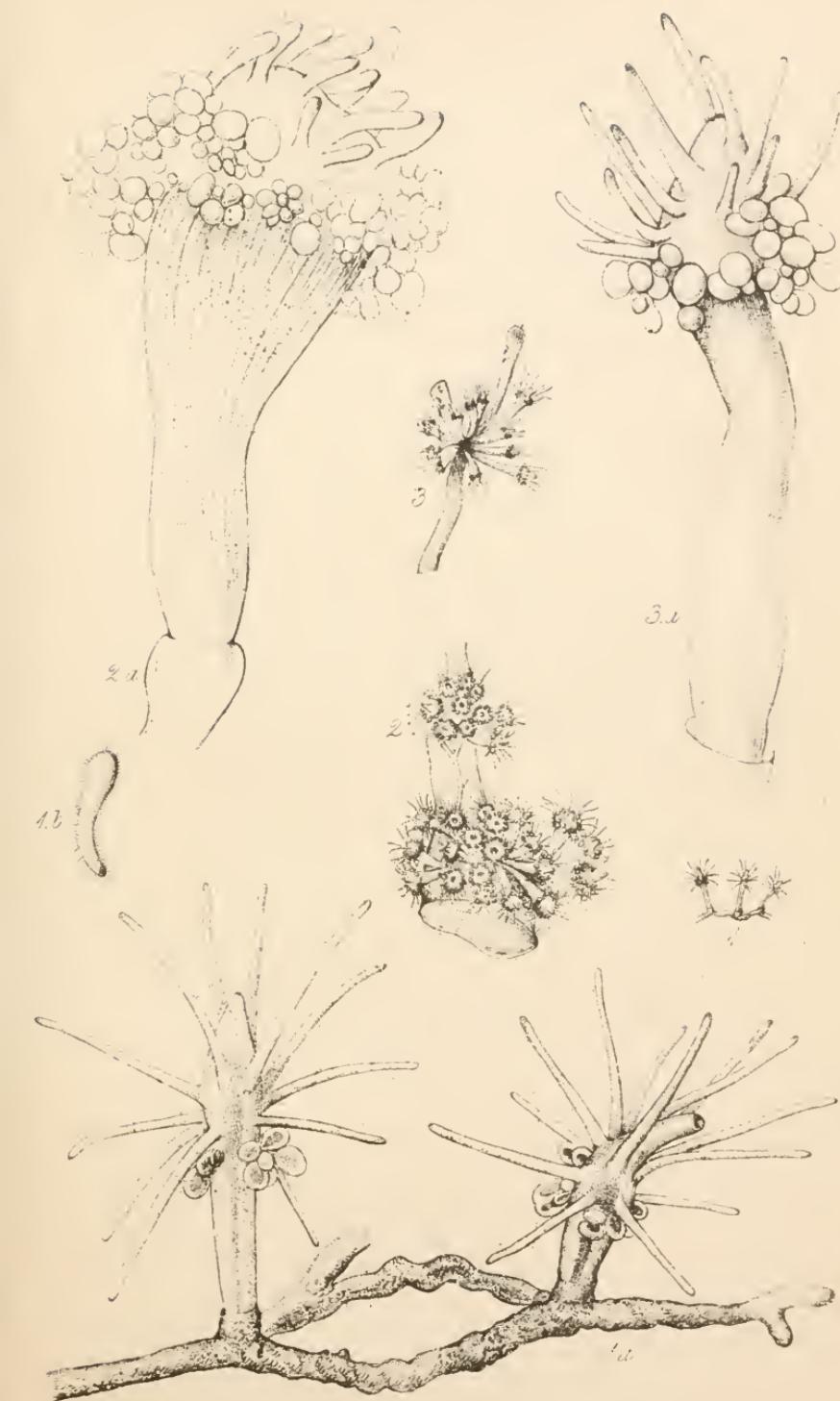


PLATE I.

[*The figures which are not credited to any one else are drawn by the Author.*]

FIG.

1. **CLAVA MULTICORNIS**, page 2, natural size.
- 1 a. The same magnified.—1 b. The planule. From drawings by Mr. Alder.
2. **CLAVA SQUAMATA**, p. 4, nat. size.
- 2 a. A polypite of the same, magnified.
3. **CLAVA CORNEA**, p. 5, nat. size.
- 3 a. A polypite, magnified.



Tuffen West. sculp.

W. West. imp.

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PLATE II.

FIG.

1. *CLAVA LEPTOSTYLA*, p. 6, a group, of the natural size.
1 a. The same, magnified. After Agassiz, 'Contributions to the Nat. Hist. of the U. S.' vol. iv. pl. xxi.
2. *TUBICLAVA CORNUCOPIÆ*, p. 11, nat. size.
2 a. The same, magnified. After Alder.



Tuffen West sculp.

W. West imp.

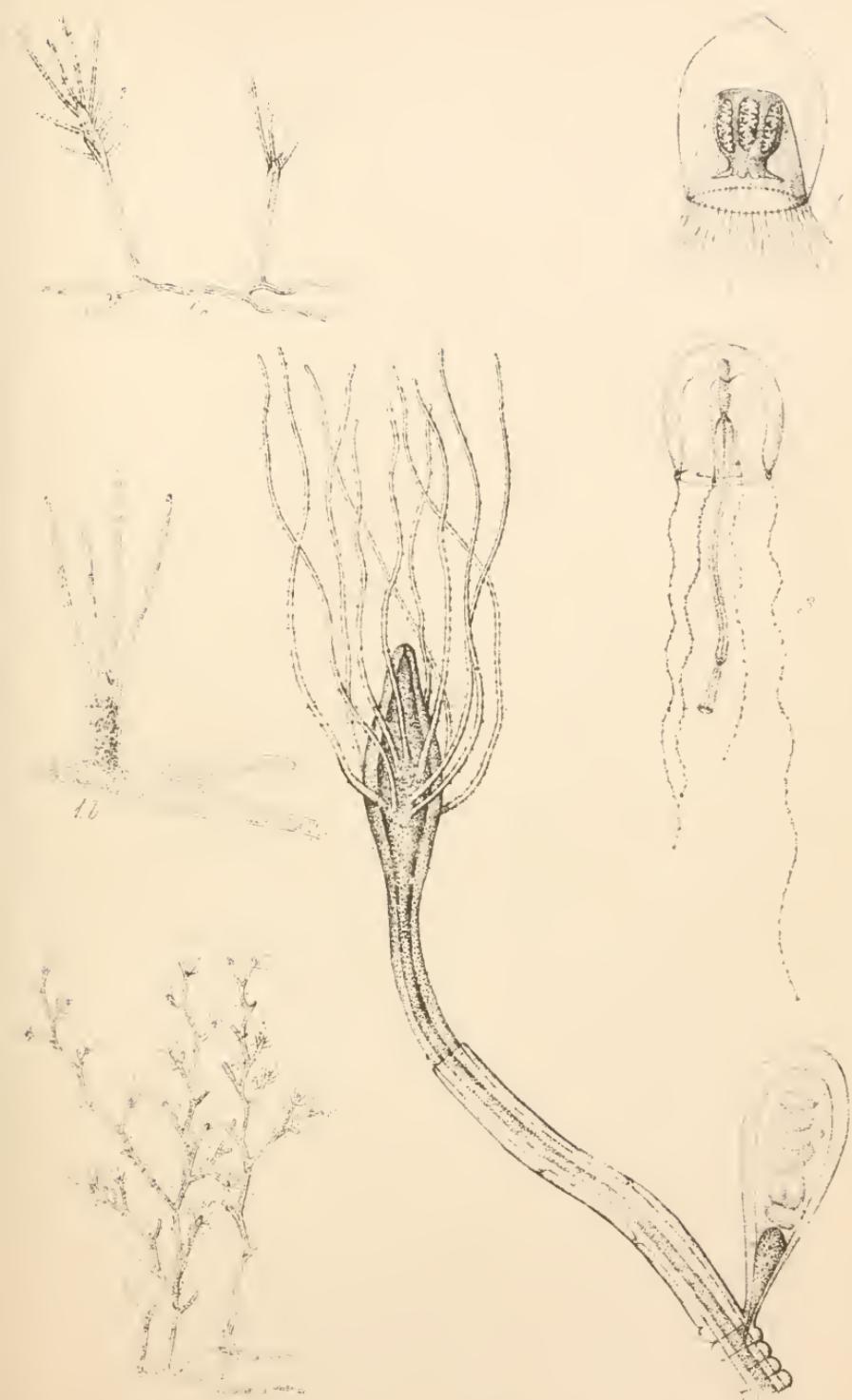
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PLATE III.

FIG.

1. *TURRIS NEGLECTA*, p. 13, polypites, of the natural size.
1 *a*. Polypites, magnified. After Wright.—1 *b*. A polypite in an earlier stage. After Gosse.—1 *c*. The medusiform zooid, magnified. After Forbes.
2. *CORDYLOPHORA LACUSTRIS*, p. 16, nat. size. After Allman.
2 *a*. A polypite and a portion of the stem bearing a gonophore, magnified. The Author.
3. The gonozoid of *SYNCORYNE (SARSIA)*, p. 49, magnified. The Author.



uffen West sculp.

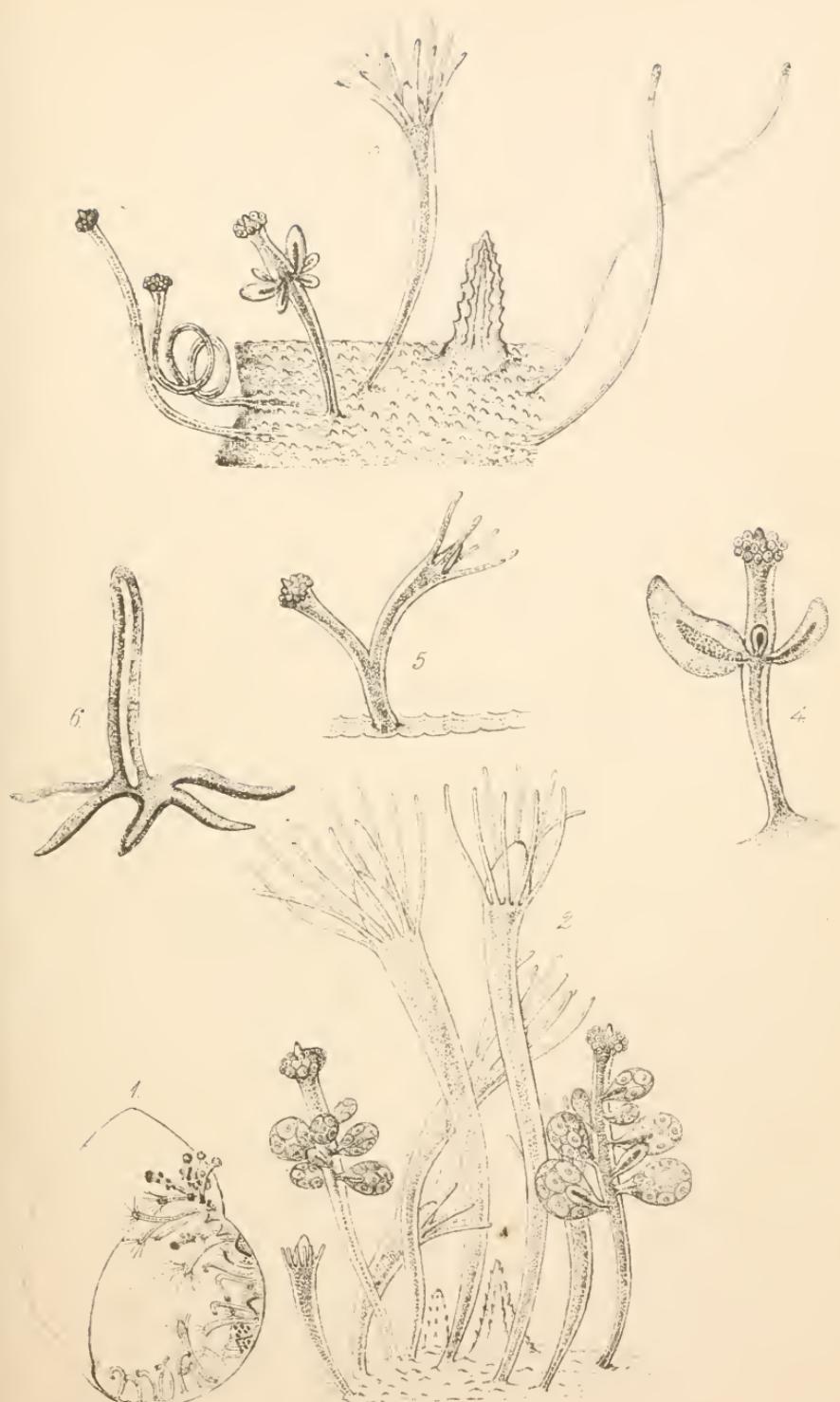
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PLATE IV.

FIG.

1. *HYDRACTINIA ECHINATA*, p. 23, nat. size.
2. A group of the same (female), magnified.
3. A portion of the erust (magnified), showing an alimentary and fertile polypite, a spine, and the spiral and tentacular appendages. This figure is dia-grammatic.
4. A polypite bearing male gonophores.
5. A monstrous polypite formed by the union of a sterile and a fertile zooid.
6. A polypite in an early stage of growth. After Quatre-fages.



Tufts West sculp.

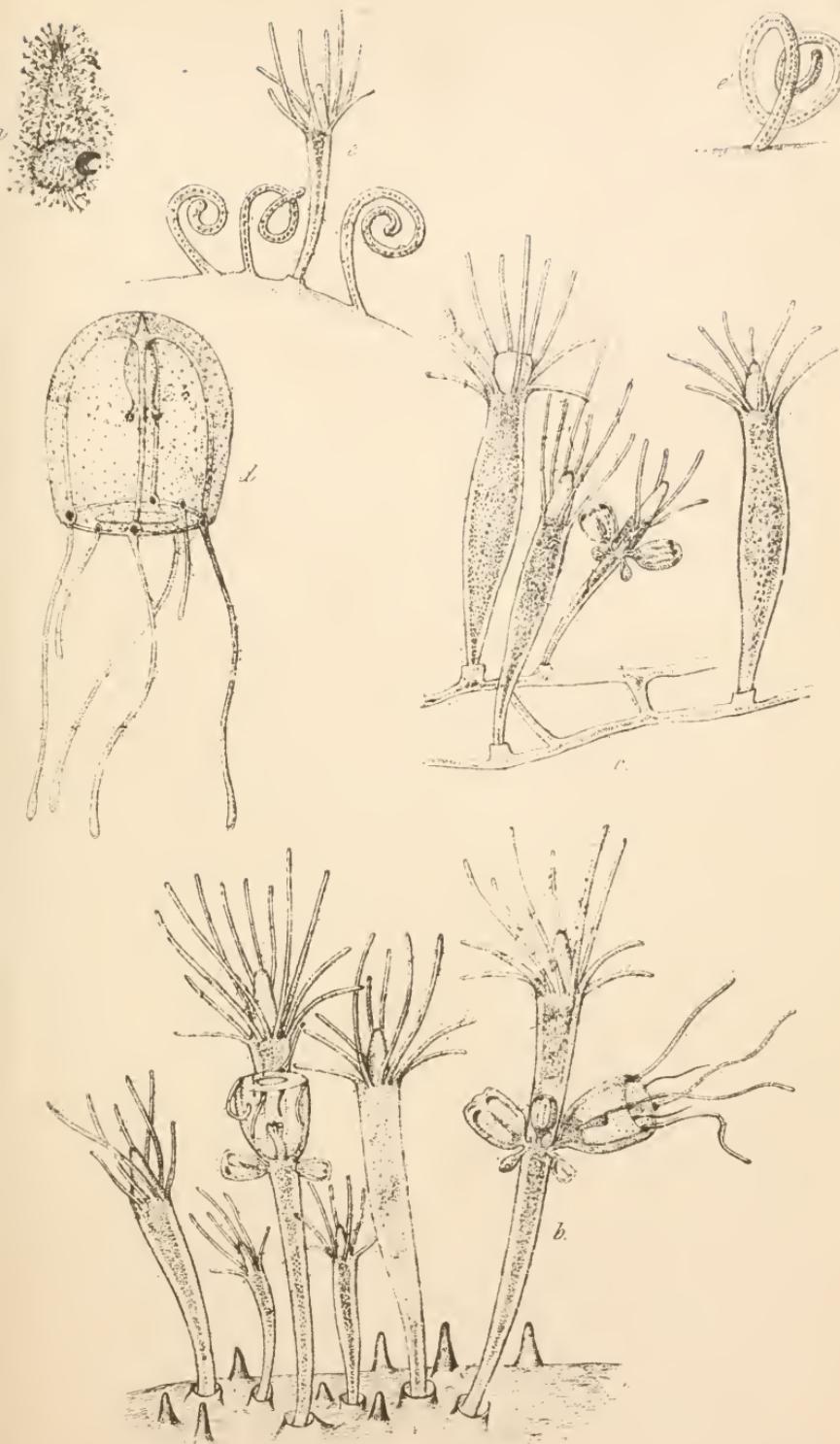
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PLATE V.

FIG.

- a.* *PODOCORYNE CARNEA*, p. 29, nat. size.
- b.* A portion of a colony, magnified, with the base consolidated into a crust.
- c.* A portion of a colony, with a simple retiform base.
- d.* The gonozoid, magnified.
- e.* A polypite from the edge of the shell, with three of the spiral appendages.
- e'*. One of the spiral appendages.



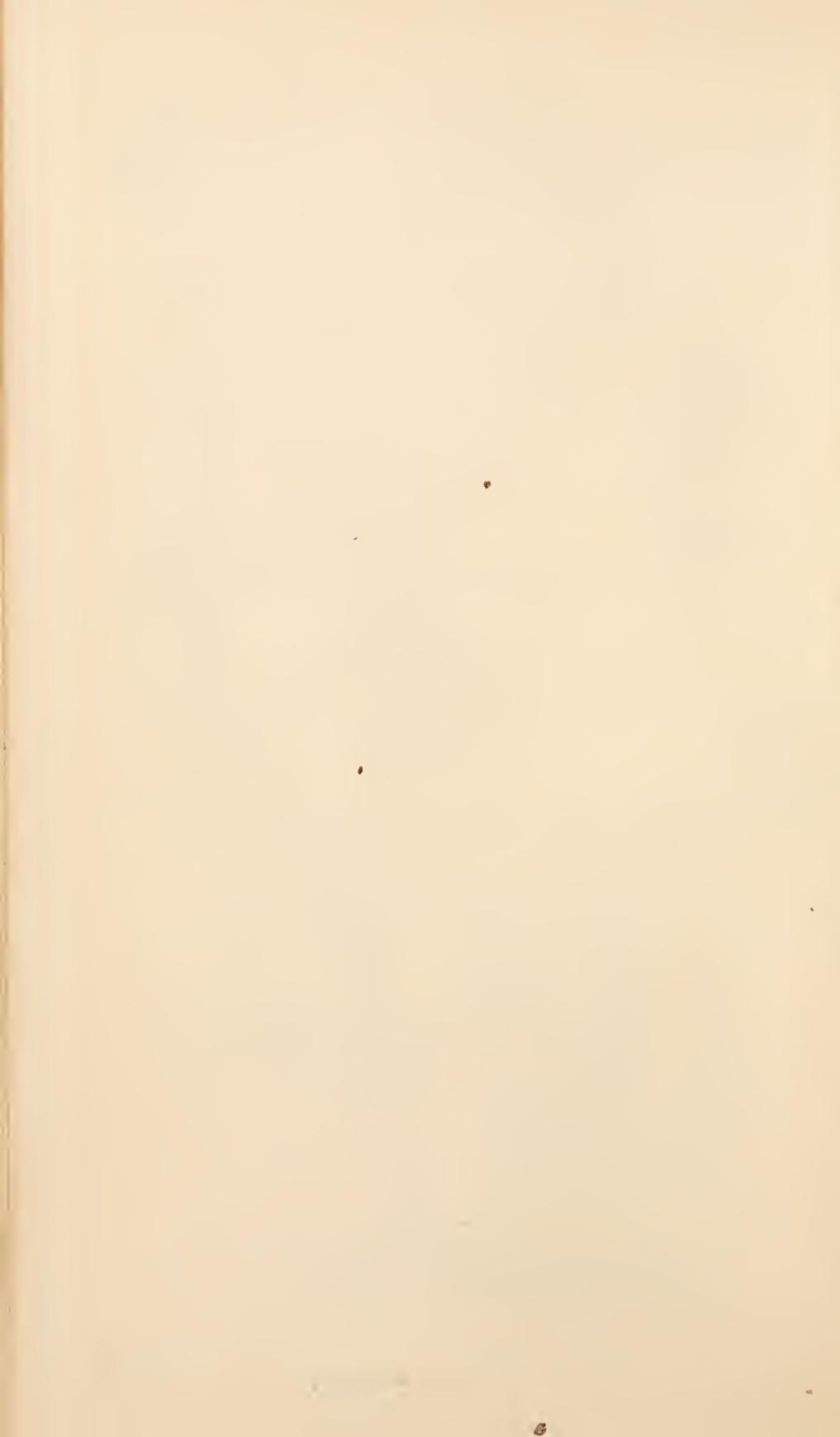
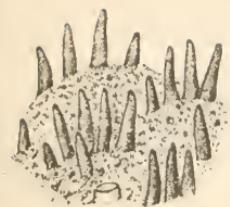




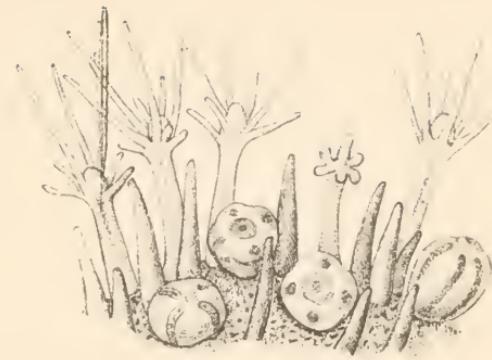
PLATE VI.

FIG.

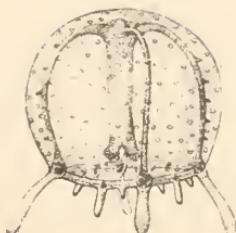
1. *PODOCORYNE AREOLATA*, p. 32, on *Natica Alderi*, nat. size.
 - 1 *a*. The same, highly magnified.—1 *b*. The gonozooid, magnified.—1 *c*. A portion of the spinous crust, magnified. After Alder.
2. *CORYNOPSIS ALDERI*, p. 34, polypites magnified.
 - 2 *a*. The gonozooid.—2 *b*. The manubrium, showing the oral tentacles.—2 *c*. One of the bulbs, bearing the ocelli and marginal tentacles. After figures by G. Hodge, Esq.



10.



11.



13.



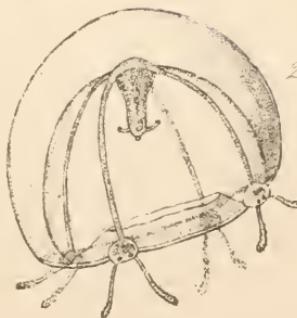
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16.



17.

Tufften West sculp.

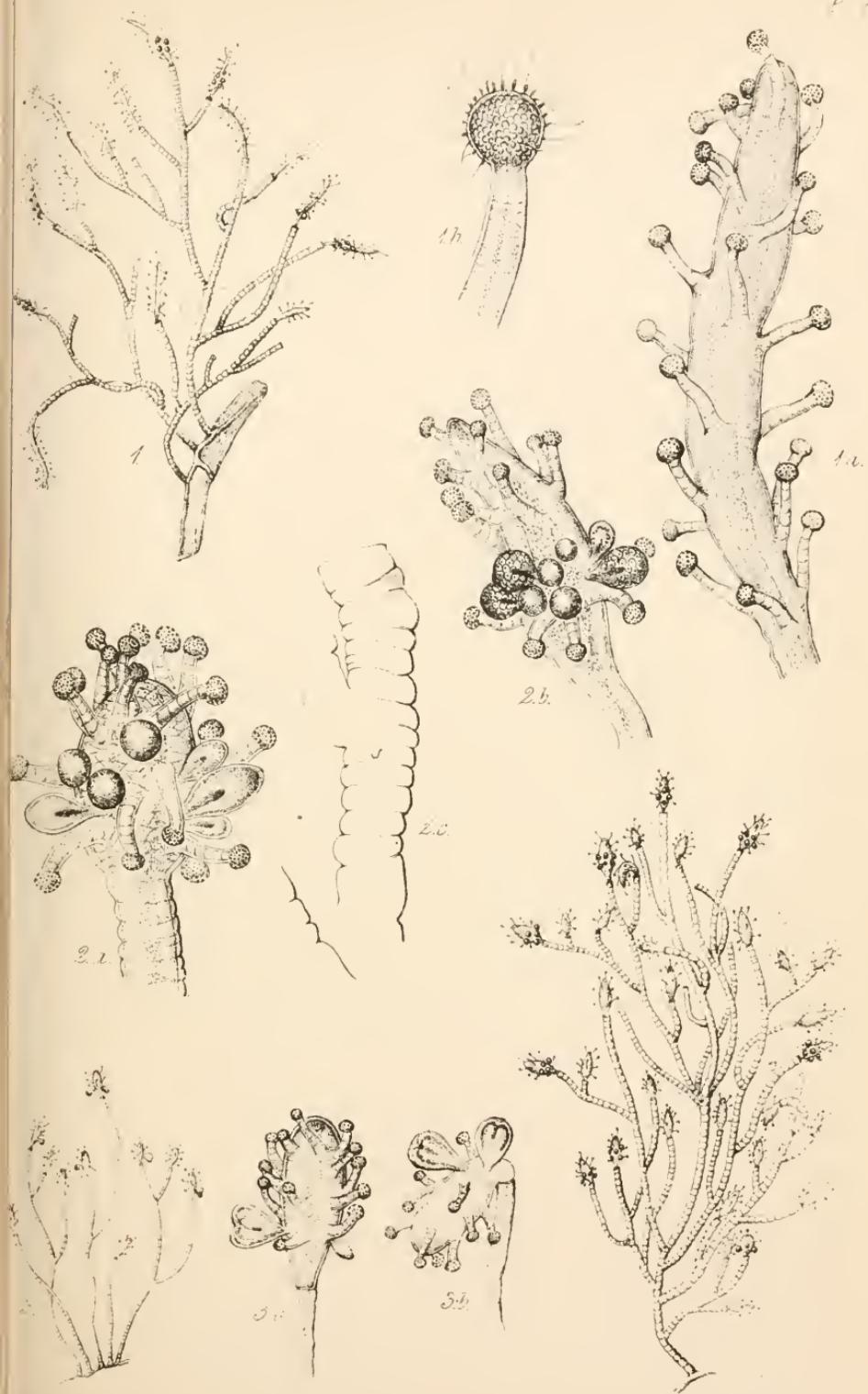
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PLATE VII.

FIG.

1. *CORYNE PUSILLA*, p. 39, nat. size.
 - 1 *a*. A polypite magnified.—1 *b*. A tentacle with the threads of the nematocysts exserted.
2. *CORYNE FRUTICOSA*, p. 44, nat. size.
 - 2 *a* and 2 *b*. Polypites magnified.—2 *c*. A portion of the stem, magnified.
3. *SYNCORYNE SARSII*, p. 52, nat. size.
 - 3 *a* and 3 *b*. Polypites, magnified.



ffen West sculp.

W. West imp.

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PLATE VIII.

FIG.

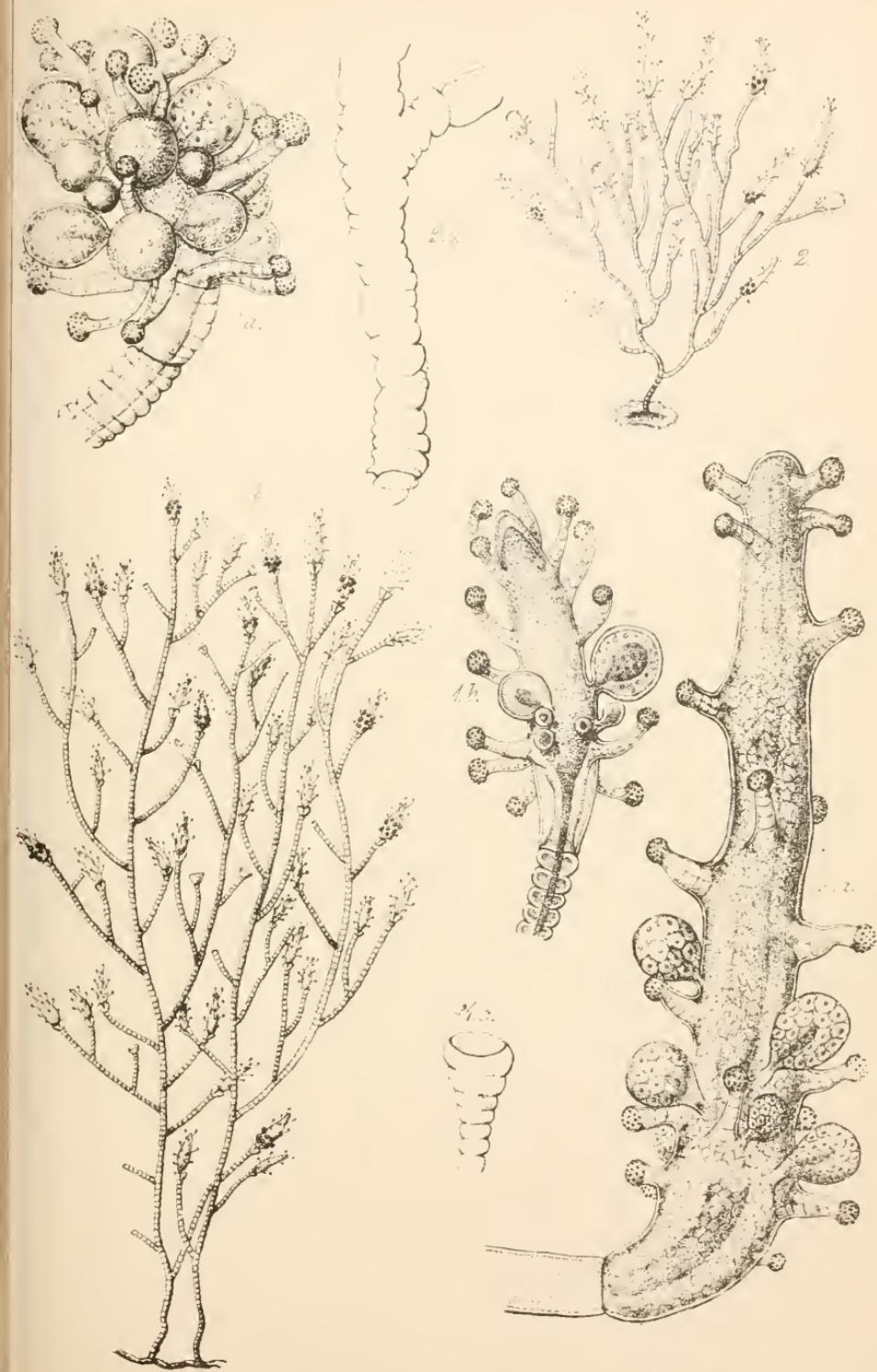
1. *CORYNE VAGINATA*, p. 41, nat. size.

1 *a* and 1 *b*. Polypites, magnified.—1 *c*. The cup-like expansion of the polypary at the base of the polypite.

2. *CORYNE VERMICULARIS*, p. 42, nat. size.

2 *a*. A polypite, magnified*.—2 *b*. A portion of the stem, magnified.

* All the enlarged figures of *Coryne* are drawn to the same scale, so as to exhibit the comparative size.



Tuffen West sculp.

W. West imp.

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PLATE IX.

FIG.

1. *CORYNE VAN-BENEDENII*, p. 45, nat. size.

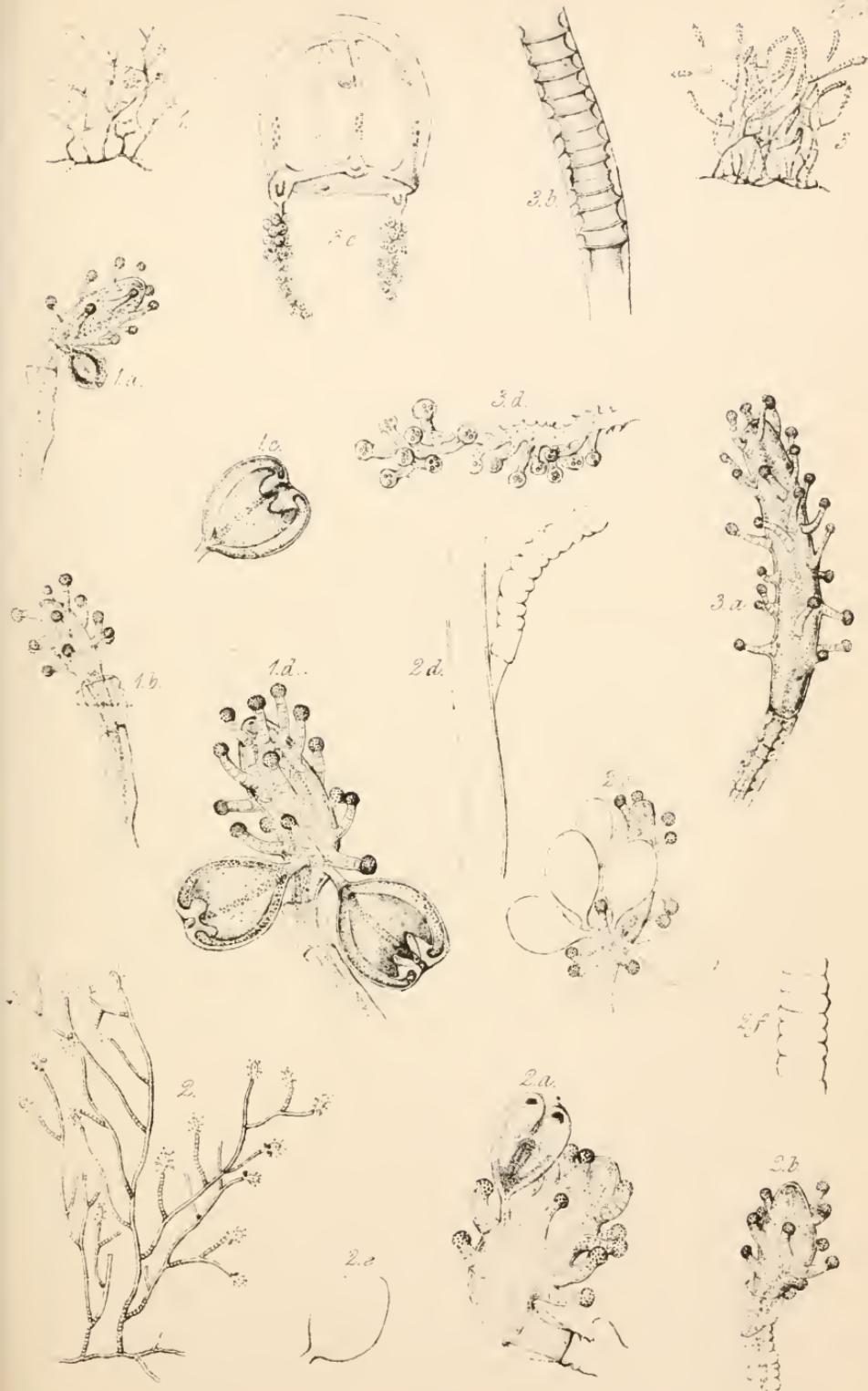
1a and 1b. Polypites, magnified.—1 c. A gonophore, highly magnified to show the structure and the contained embryo.—1 d. A polypite with gonophores, magnified.

2. *SYNCORYNE EXIMIA*, p. 50, nat. size.

2a, 2b, 2c. Polypites, magnified.—2 d. A portion of a stem and branch.—2 e. A gonophore, magnified.—2f. Annulated space at the base of the stem.

3. *ZANCLEA IMPLEXA*, p. 59, nat. size.

3a. A polypite, magnified.—3 b. A portion of the stem, magnified to show the structure of the polypary.—3 c. The gonozooid. After Alder.—3 d. One of the tentacles of *Zanclea costata*. After Gegenbaur.



Tussen West. sculp.

W. West imp.

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PLATE X.

FIG.

1. **SYNCORYNE GRAVATA**, p. 53, nat. size.

1 *a*. The same, magnified.—1 *b*. A single polypite, more highly magnified.—1 *c*. A polypite partially atrophied.—1 *d*. A polypite wholly atrophied, bearing two imperfect gonozoooids (T. H.).—1 *e*. A gonozoid almost fully developed.—1 *f*. A female gonozoid, as it appears late in the breeding-season, laden with ova. All the figures of *S. gravata*, with the exception of 1 *d*, are after Agassiz, 'Contrib. to the N. H. U. S.' vol. iii. pl. xvii.

2. **SYNCORYNE DECIPIENS**, p. 56, polypites, magnified.
From a drawing by Mr. Alder.



Tufts West. sculp.

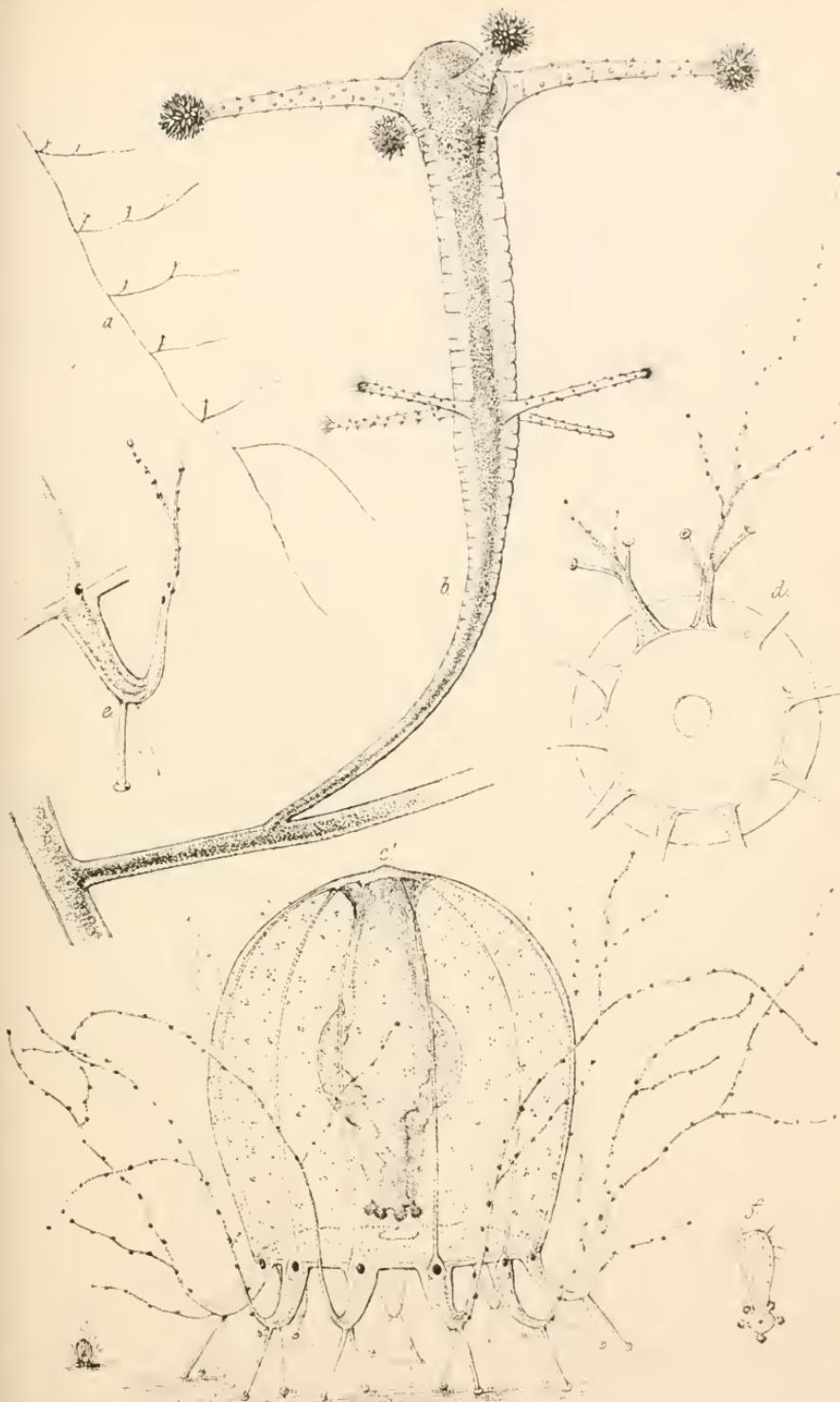
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PLATE XI.

FIG.

- a.* **CLADONEMA RADIATUM**, p. 62, nat. size.
- b.* A polypite, highly magnified.—*c.* The gonozooid, nat. size.—*c'*. Ditto, magnified.—*d.* Ditto, as seen from below.—*e.* One of the tentacles of the gonozooid.—*f.* The manubrium, showing the oral lobes. From drawings by E. W. H. Holdsworth, Esq.



Tuffen West sculp.

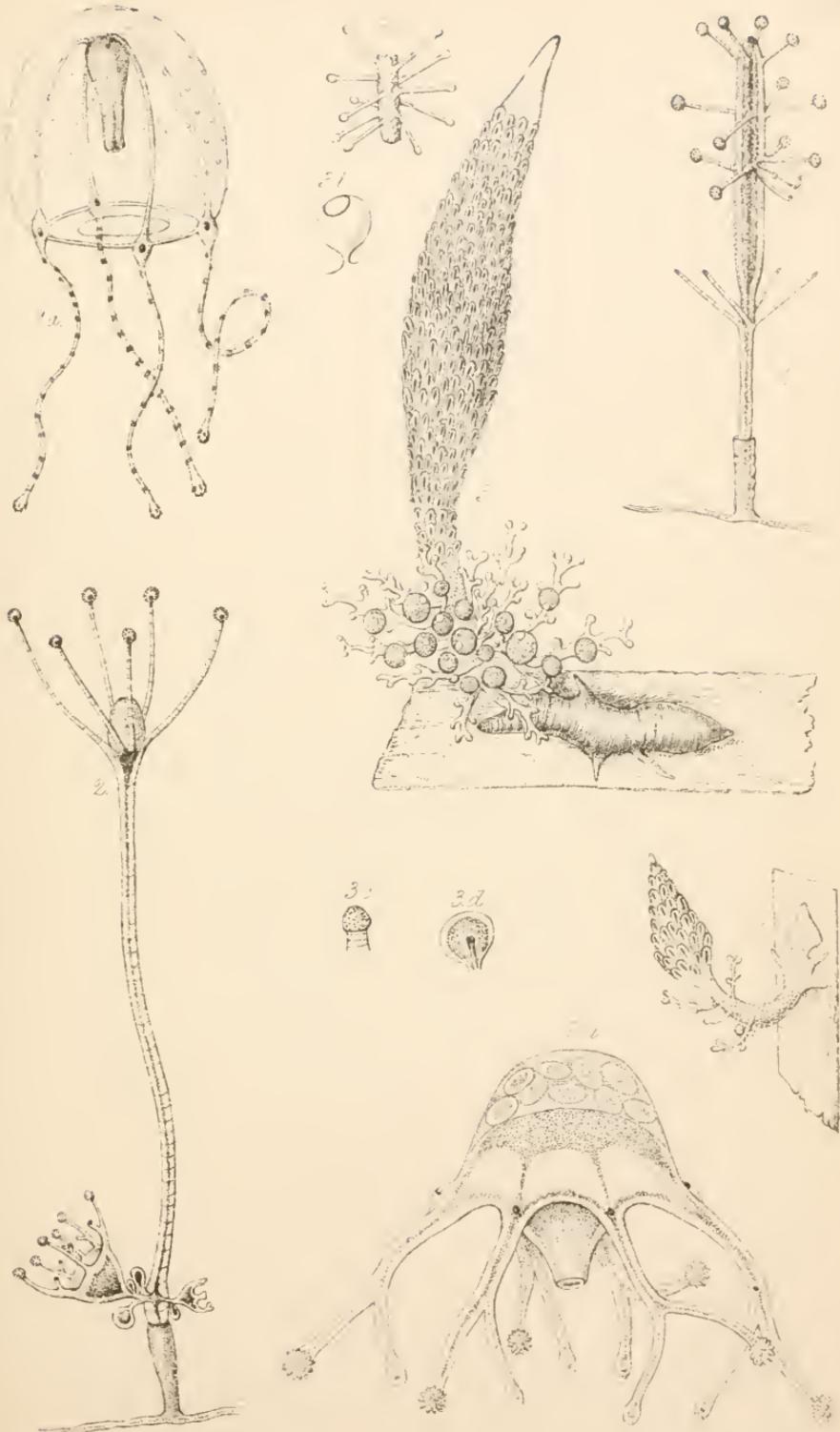
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PLATE XII.

FIG.

1. *STAURIDIUM PRODUCTUM*, p. 68, a polypite, highly magnified.—1 *a*. The gonozoid.
2. *CLAVATELLA PROLIFERA*, p. 73, a polypite, highly magnified, bearing clusters of gonozoids.
2 *a*. The ambulatory gonozoid, magnified.
3. *MYRIOTHELA PHRYGIA*, p. 77, a little above nat. size.—
3'. The same, partially contracted, nat. size.
3 *a*. The embryo, magnified. After Alder.—3 *b* and 3 *d*. The gonophore, magnified.—3 *c*. A tentacle, magnified.



Tufften West sculp.

W. West imp.

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PLATE XIII.

FIG.

a. EUDENDRIUM RAMOSUM, p. 82, nat. size.

b. A portion, magnified.

c. Ditto, more highly magnified.

From drawings by Mr. Tuffen West.



Tuffen West sculp.

W. West imp.

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PLATE XIV.

FIG.

1. **EUDENDRIUM ARBUSCULA**, p. 84, nat. size.
- 1 *a*. Male gonophore, magnified. This figure is after Wright.
2. **EUDENDRIUM CAPILLARE**, p. 84, nat. size.
3. **EUDENDRIUM INSIGNE**, p. 86, nat. size.
- 3 *a*. A polypite, highly magnified.
- 3 *b*. A polypite with male gonophores.
4. **GARVEIA NUTANS**, p. 102, nat. size.
- 4 *a*. A polypite, magnified.
- 4 *b*. Gonophore, magnified.

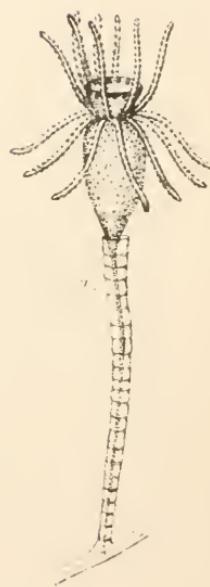
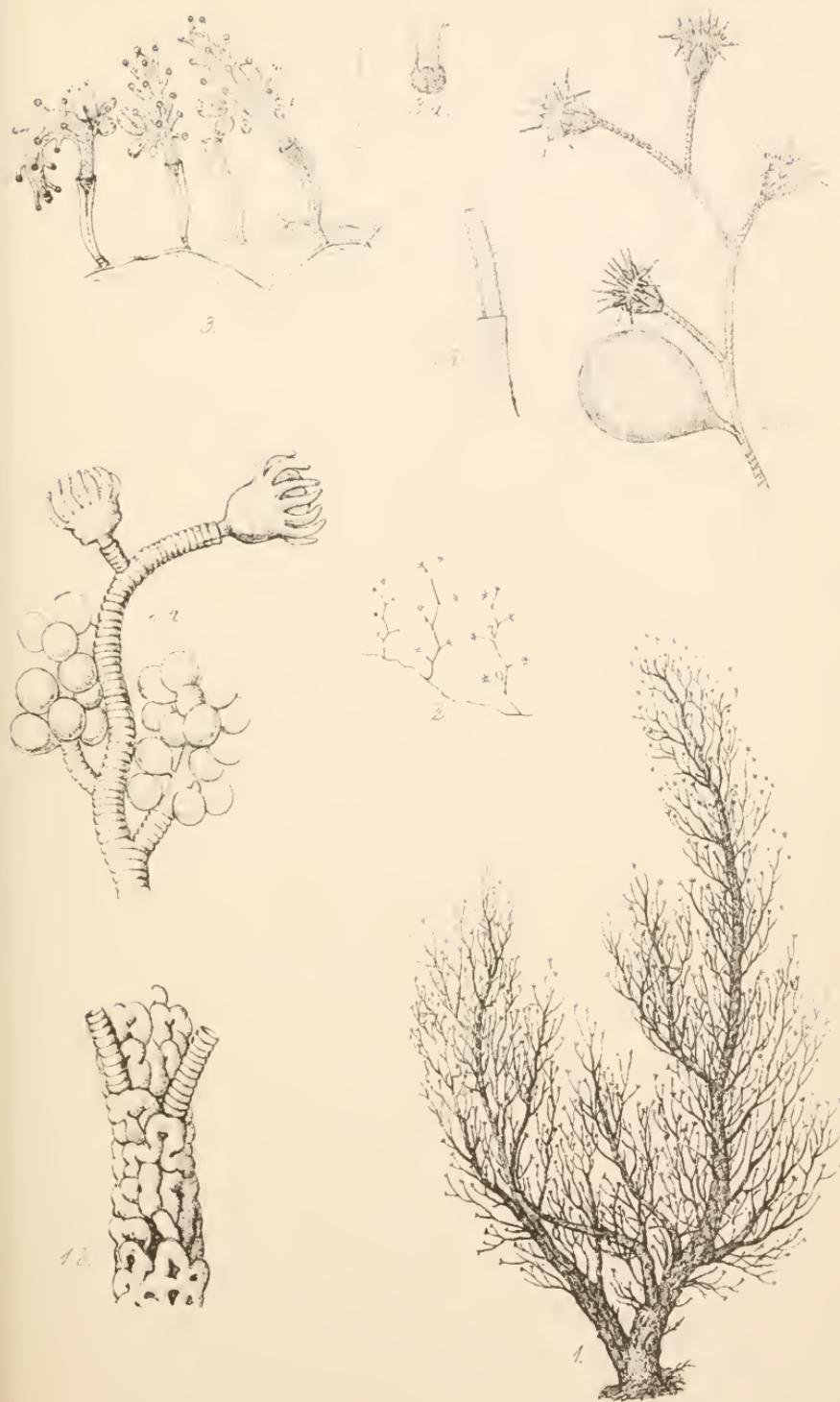


PLATE XV.

FIG.

1. *EUDENDRIUM ANNULATUM*, p. 83, nat. size.
 - 1 *a*. The extremity of a branch, magnified.—1 *b*. A portion of one of the larger stems. These figures are after Alder.
2. *BIMERIA VESTITA*, p. 103, nat. size.
 - 2 *a*. A portion bearing a gonophore, magnified.—2 *b*. A tentacle, magnified to show the membranous sheath. After Wright.
3. *SYNCORYNE PULCHELLA*, p. 57, and Appendix, p. 319, magnified.—3 *a*. A tentacle, magnified. From drawings by the Author.



T. T. West. sculp.

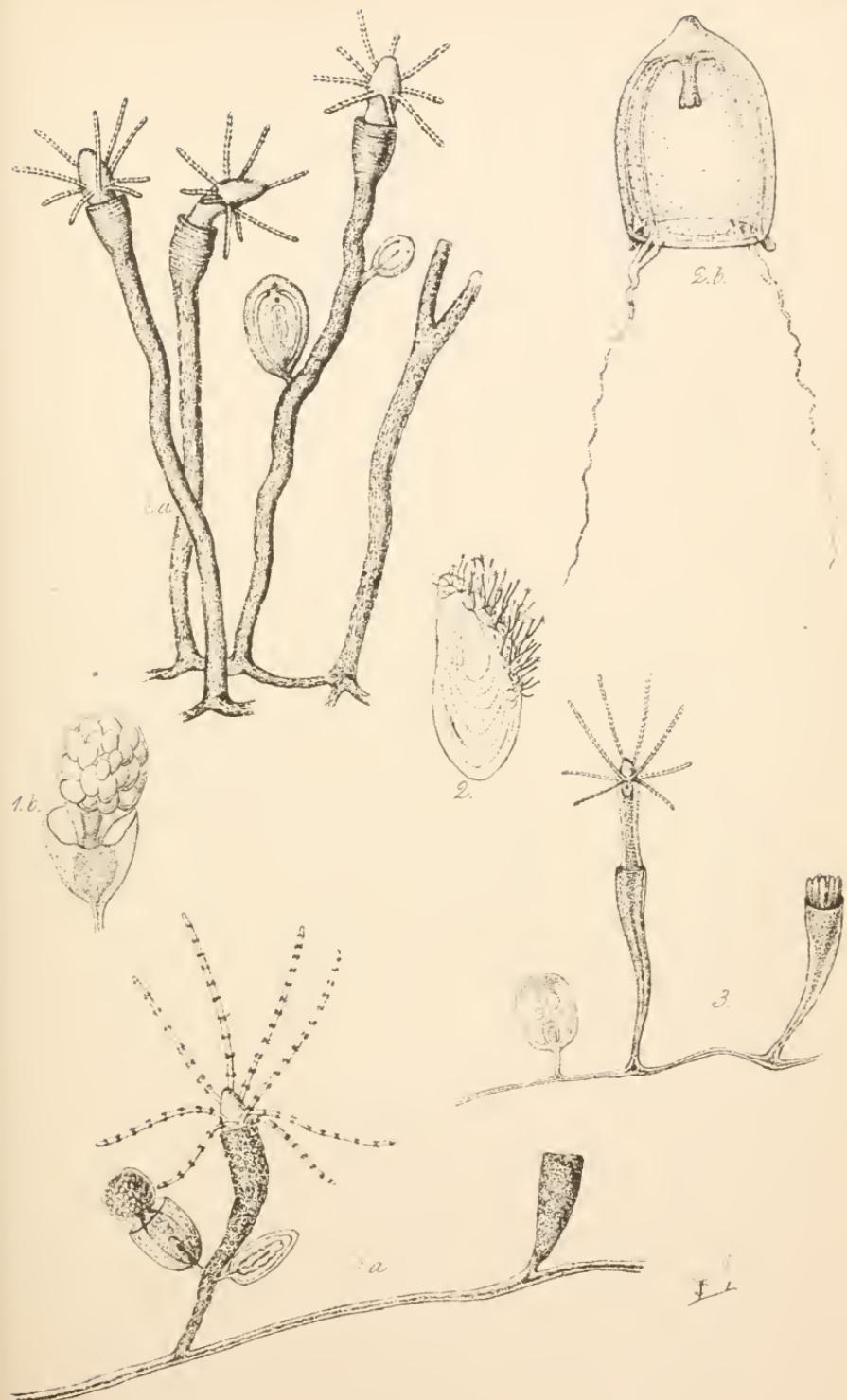
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PLATE XVI.

FIG.

1. *ATRACTYLIS ARENOSA*, p. 88, nat. size.
1 *a*. Ditto, magnified.—1 *b*. The ovary after the rupture of the gonophore. From drawings by the Author.
2. *PERIGONIMUS REPENS*, p. 90, on an operculum, nat. size.
2 *a*. Polypites, magnified.—2 *b*. The gonozoooid, magnified. From drawings by Mr. Alder.
3. *PERIGONIMUS SERPENS*, p. 95, highly magnified. From a drawing by the Author.



Tuffen West. sculp.

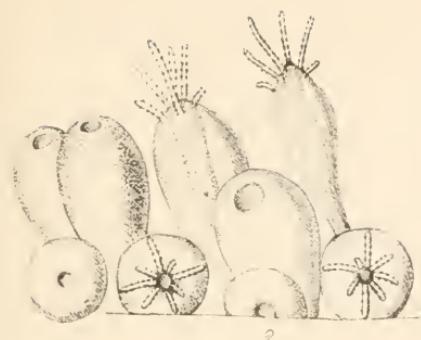
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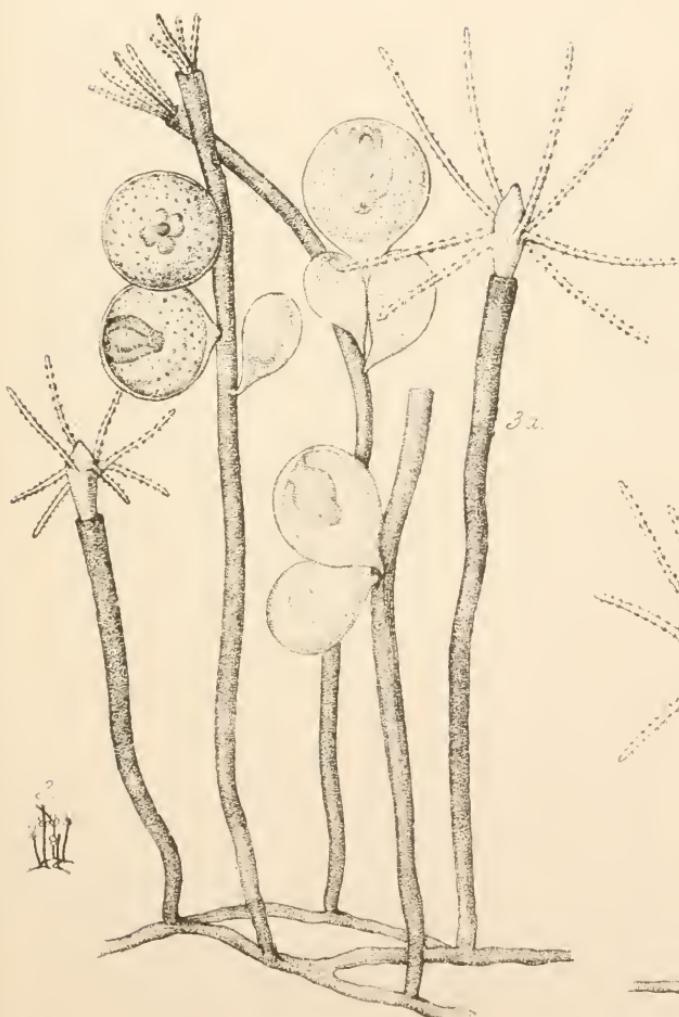
PLATE XVII.

FIG.

1. *PERIGONIMUS SESSILIS*, p. 93, magnified.
1 a. A single polypite, more highly magnified. After Dr. Strethill Wright.
2. *PERIGONIMUS PALLIATUS*, p. 93, magnified. After Dr. Strethill Wright.
3. *PERIGONIMUS (?) LINEARIS*, p. 96, nat. size.
3 a. The same, magnified.—3 b. The gonozoid. After Alder.
4. *PERIGONIMUS REPENS* (young), p. 90, magnified. From a drawing by Mr. Alder.



2.



3a.



3b.

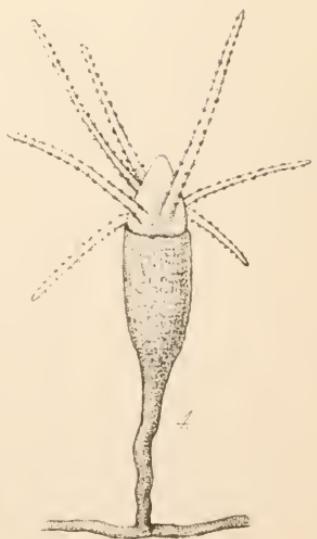


PLATE XVIII.

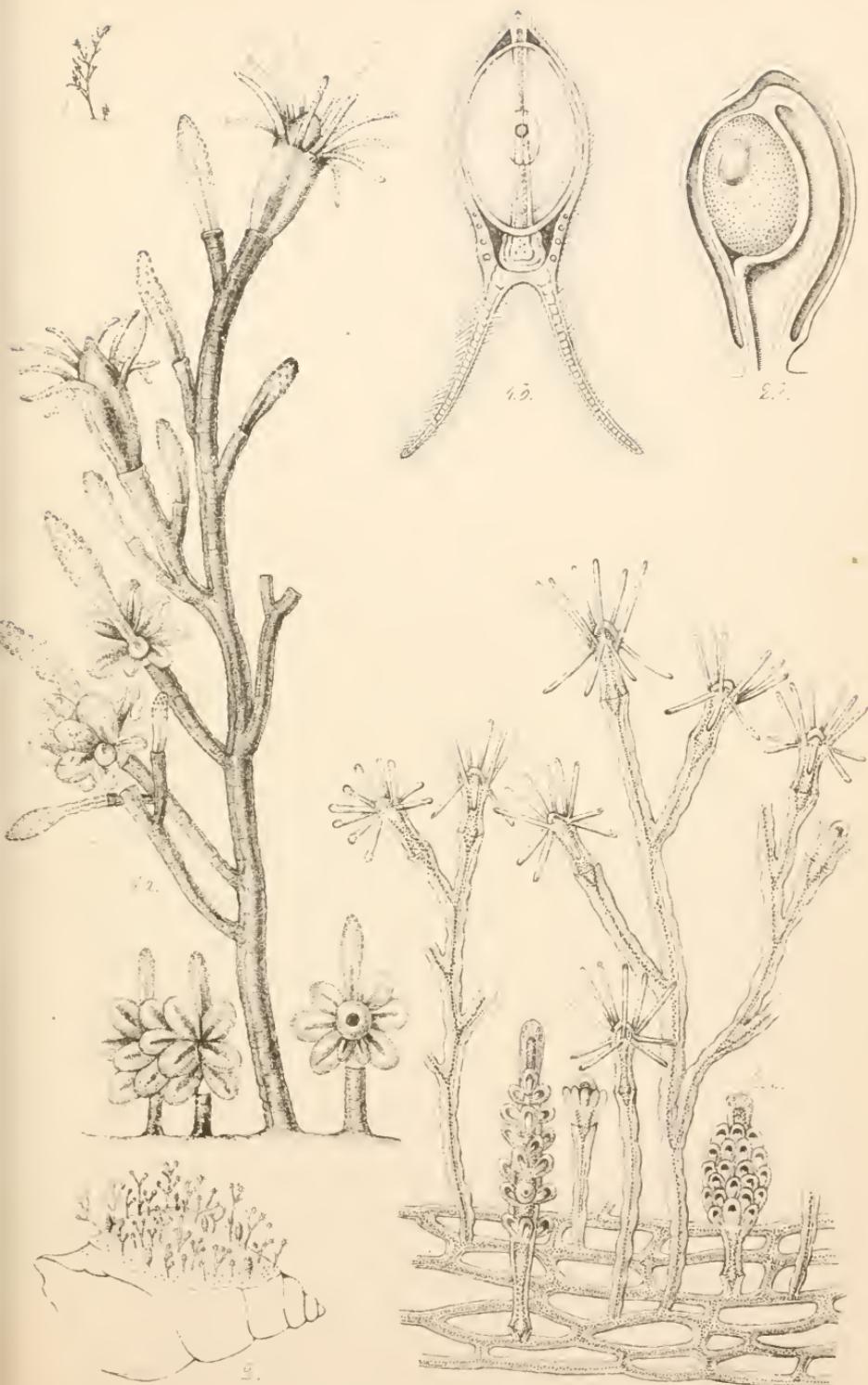
FIG.

1. *DICORYNE CONFERTA*, p. 105, nat. size.

1 *a*. The same, magnified.—1 *b*. The gonozoooid (female), magnified. After Alder.

2. *HETEROCORDYLE CONYBEAREI*, p. 107, a colony, of the nat. size, on shell.

2 *a*. A portion, magnified.—2 *b*. The gonophore, magnified. After Allman.



Fuffer West sculp.

W. West vnp.

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PLATE XIX.

FIG.

1. *HYDRANTHEA MARGARICA*, p. 100, magnified.

1 *a*. One of the tentaeles bearing a cluster of thread-cells, magnified.—1 *b*. One of the branched vessels of the sporosac.—1 *c*. Bean-shaped thread-cells, magnified. From drawings by the Author.

2. *BOUGAINVILLIA RAMOSA*, p. 109, nat. size. From a drawing by Mr. Tuffen West.

2 *a*. A branchlet, magnified, to show the cup-like expansion of the polypary around the polypite (T. H.).—2 *b*. A branchlet, bearing a gonophore, magnified (T. H.).—2 *c*. The gonozooid, at the time of detachment, highly magnified. After Van Beneden.

3. *BOUGAINVILLIA* ? species, p. 112, nat. size.

3 *a*. The same, magnified. From drawings by the Author.



Luffen West. sculp.

W. West. imp.

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PLATE XX.

FIG.

TUBULARIA INDIVISA, p. 115.

a. Nat. size.—*b.* A cluster of gonophores, magnified.—
c, d. The embryo shortly after its exclusion.



Tuffen West. sculp.

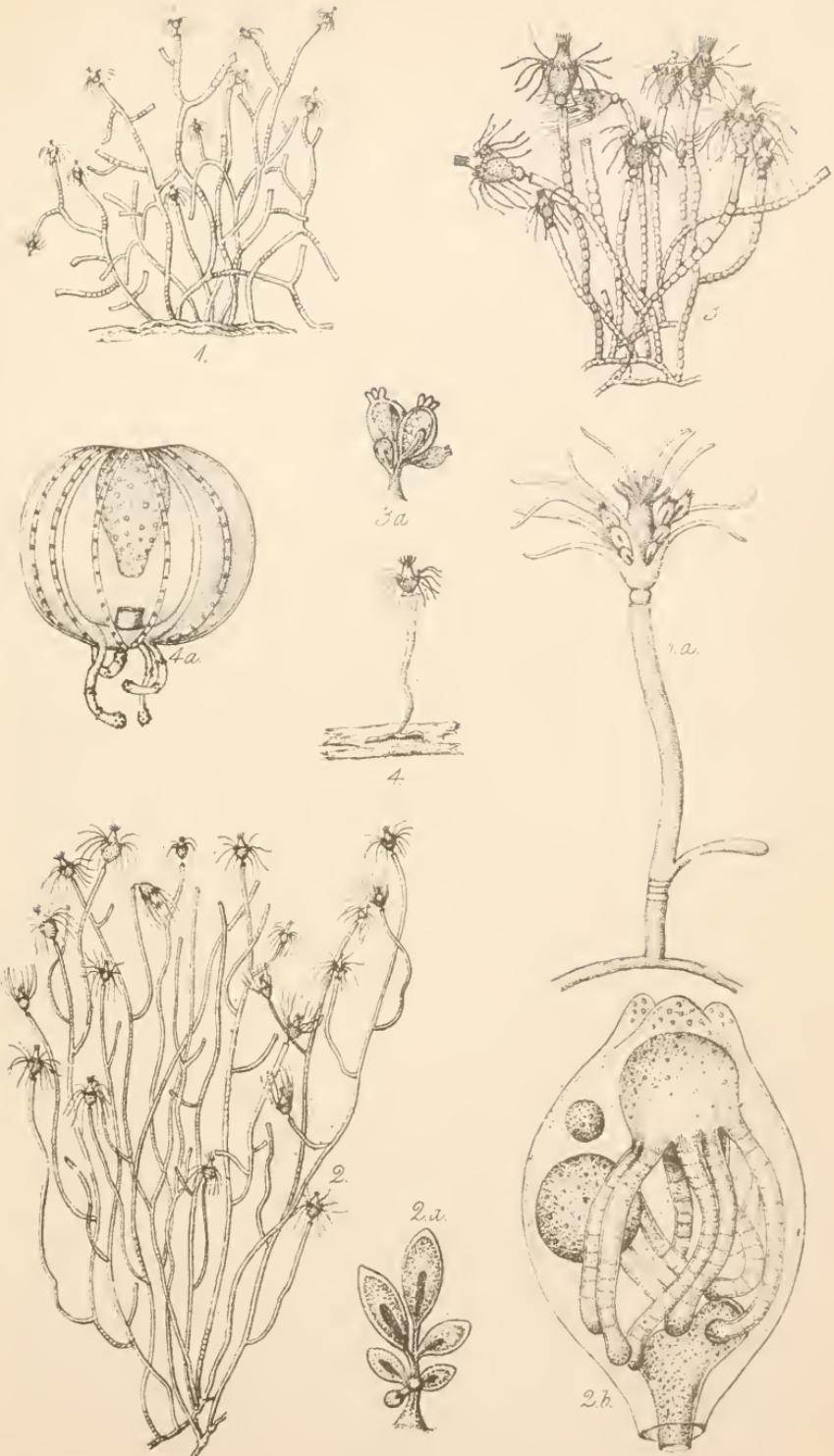
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PLATE XXI.

FIG.

1. *TUBULARIA LARYNX*, p. 118, nat. size. The Author.
- 1 a. A polypite, magnified. From a drawing by Mr. Alder.
2. *TUBULARIA CORONATA*, p. 119, nat. size.
- 2 a. A cluster of gonophores, magnified. The Author.
- 2 b. A single gonophore, highly magnified, to show the contained embryo. After Van Beneden.
3. *TUBULARIA BELLIS*, p. 122, nat. size.
- 3 a. A cluster of gonophores, magnified. The Author.
4. *ECTOPLEURA DUMORTIERII*, p. 124, nat. size. The Author.
- 4 a. The gonozoooid, magnified. After Van Beneden.



Tuffen West sculp.

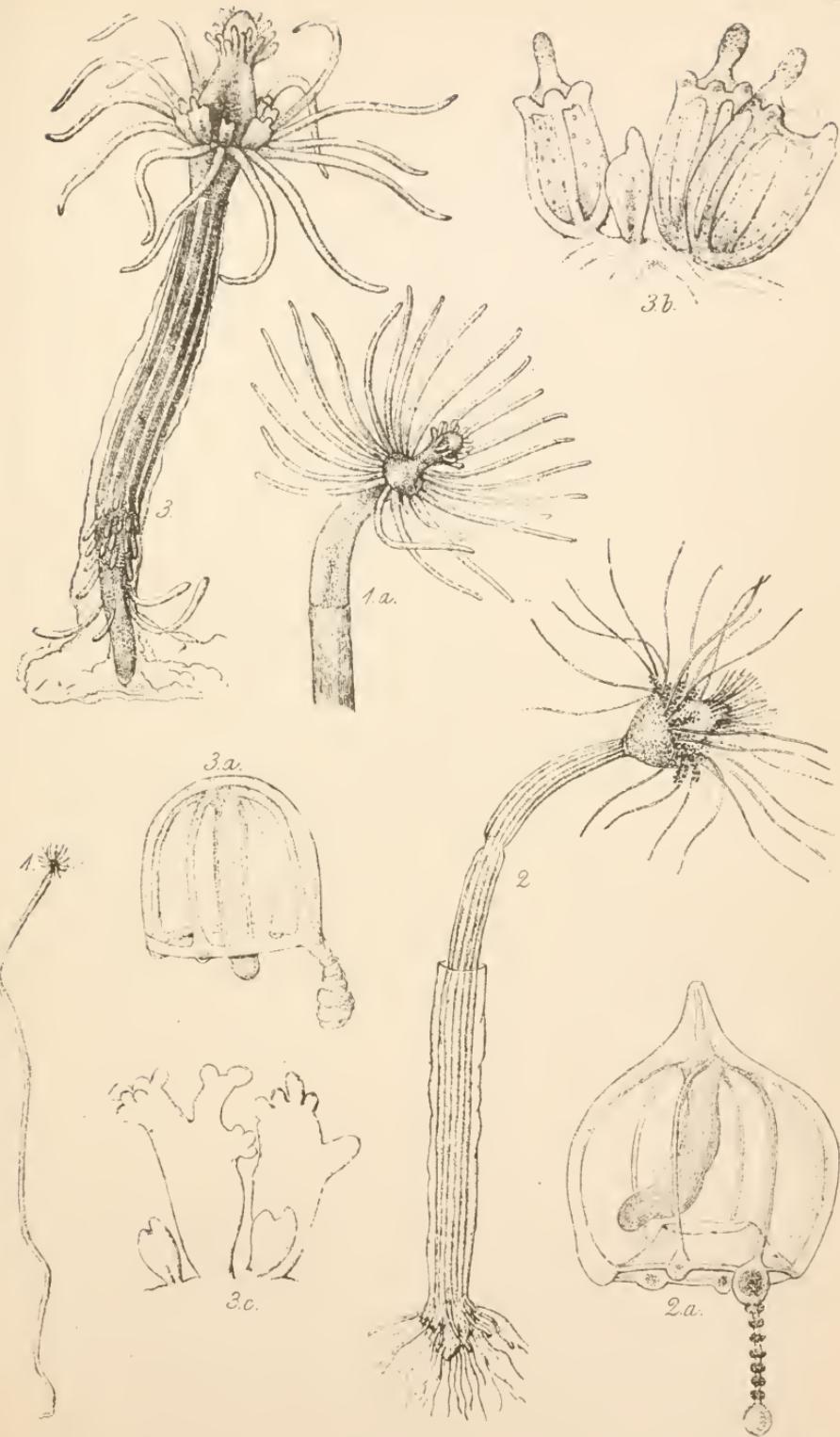
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PLATE XXII.

FIG.

1. *TUBULARIA SIMPLEX*, p. 121, nat. size.
1 *a*. The polypite, magnified. After Alder.
2. *CORYMORPHA NUTANS*, p. 127, nat. size. From a drawing by the Author.
2 *a*. The gonozoid, magnified. After Hodge.
3. *CORYMORPHA NANA*, p. 130, magnified.
3 *a*. The gonozoid after liberation, magnified.—3 *b*. A group of gonozoids before liberation.—3 *c*. Another group, differently shaped. After Alder.



Tiffen West. sculp.

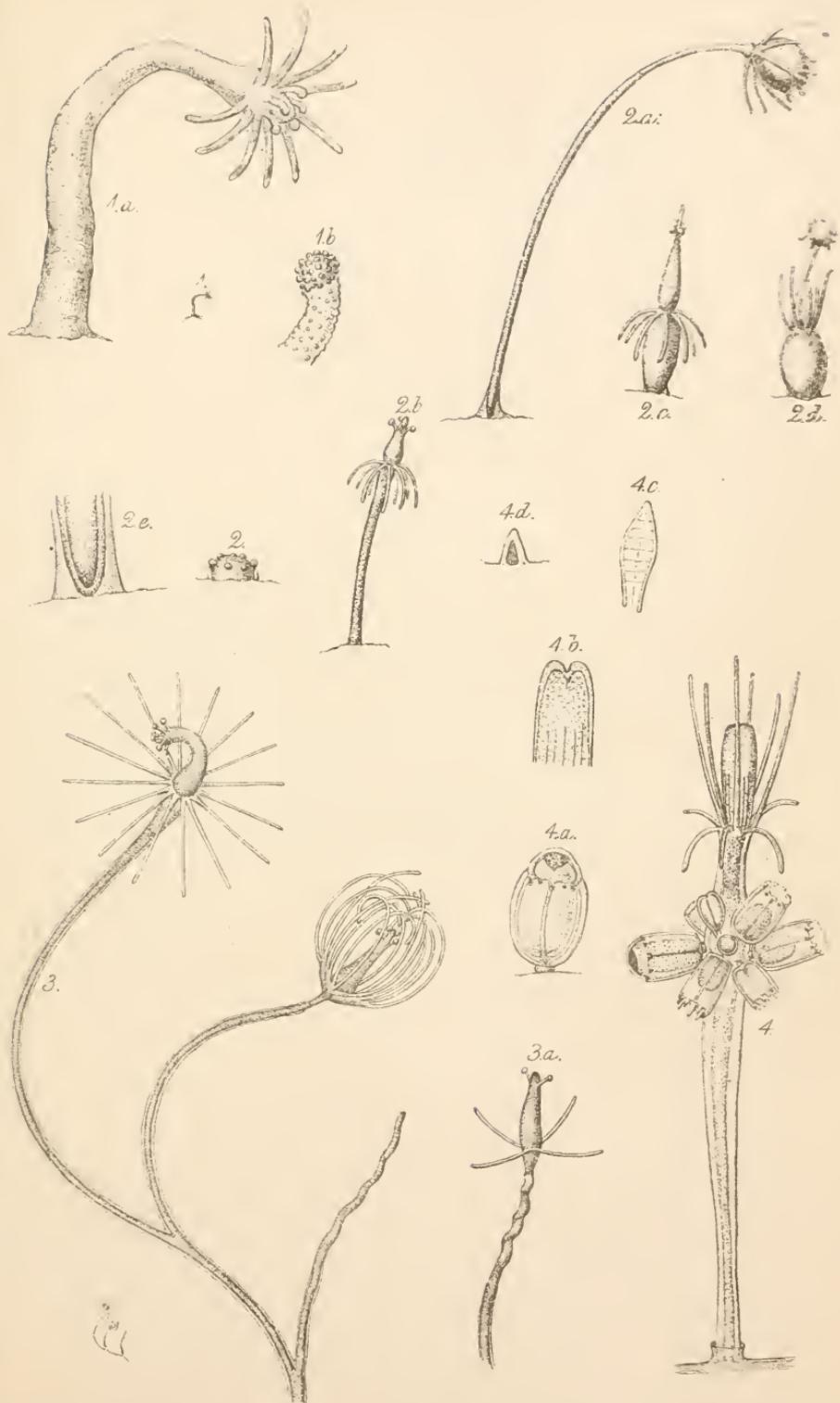
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PLATE XXIII.

FIG.

1. *VORTICLAVA HUMILIS*, p. 132, nat. size.
- 1 *a*. The same, magnified.—1 *b*. One of the capitate tentacles, much enlarged. After Alder.
2. *VORTICLAVA PROTEUS*, p. 133, contracted.
- 2 *a*, 2 *b*, 2 *c*, 2 *d*. The same, in different states.—2 *e*. Diagram of the tissues of the polypite. After Dr. Strethill Wright.
3. *ACHARADRIA LARYNX*, p. 134, magnified.
- 3 *a*. An immature polypite. After Dr. Wright.
4. *PODOCORYNE PROBOSCIDEA*, p. 317 (Appendix), highly magnified.
- 4 *a*. A gonophore.—4 *b*. The oral extremity of the proboscis of the polypite.—4 *c*. A tentacle when contracted.—4 *d*. One of the marginal tentacles of the gonozooid: all magnified. From drawings by the Author.



Tuffen West sculp.

W. West imp.

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PLATE XXIV.

FIG.

1. *CLYTIA JOHNSTONI*, p. 143, magnified.
1 *a*. The gonozooid.
2. *CAMPANULARIA VOLUBILIS*, p. 160, magnified.
3. *CAMPANULARIA HINCKSHI*, p. 162, magnified.
3 *a*. Ditto, with the capsule, magnified.





Tuften West. sculp.

W. West. imp.

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PLATE XXV.

FIG.

1. *OBELIA GENICULATA*, p. 149, nat. size.

1 *a*. A shoot, magnified.

2. *GONOTHYRÆA LOVÉNI*, p. 181, nat. size.

2 *a*. A shoot, magnified, bearing female gonophores.

2 *b*. A capsule, with male gonophores, magnified.



Tufts West sculp.

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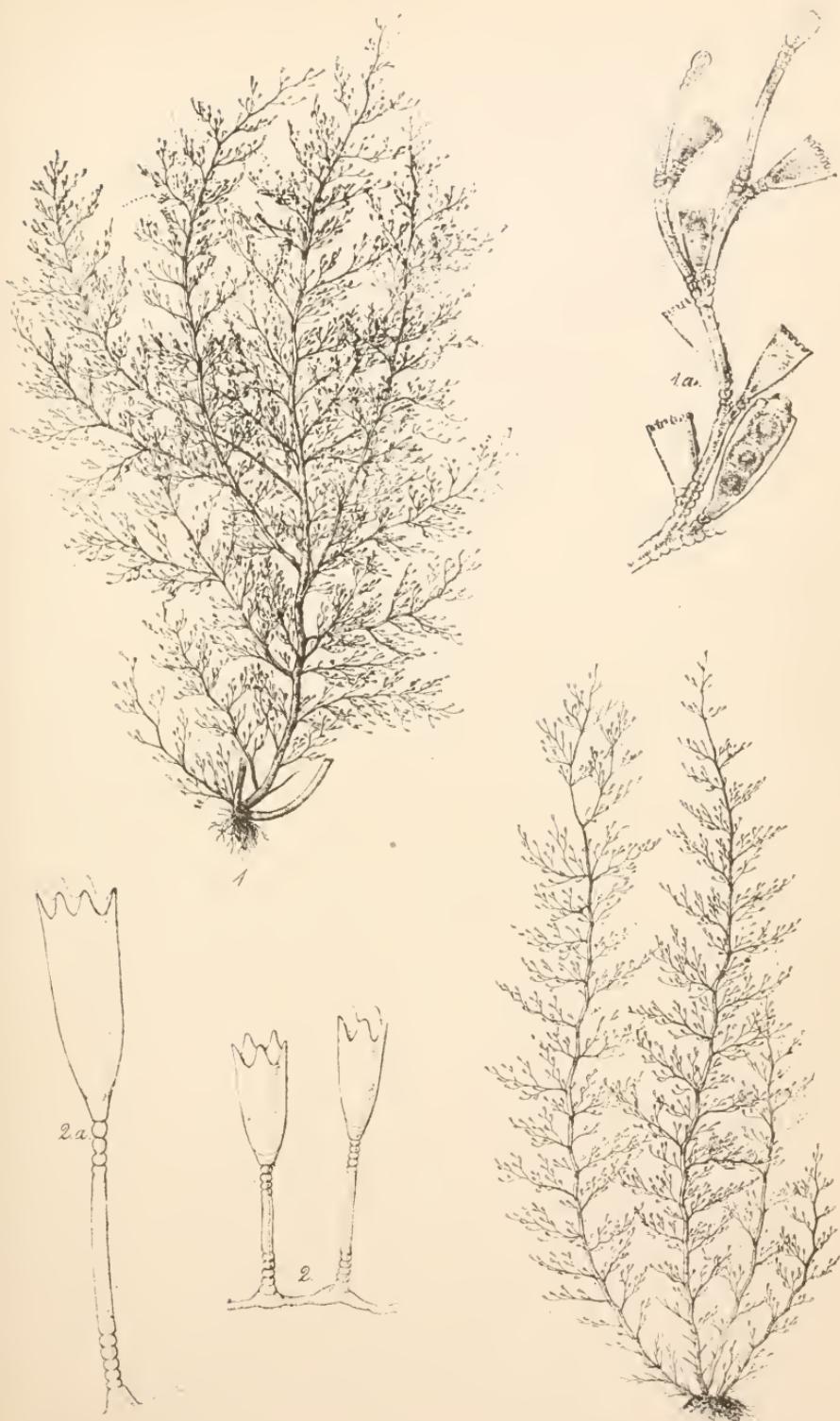
PLATE XXVI.

FIG.

1, 1'. *OBELIA GELATINOSA*, p. 151, nat. size.

1 a. A portion, magnified. From drawings by Mr. Tuffen West.

2, 2 a. *CAMPANULARIA RARIDENTATA*, p. 176, magnified.
From drawings by Mr. Alder.



Tuffen West sculp.

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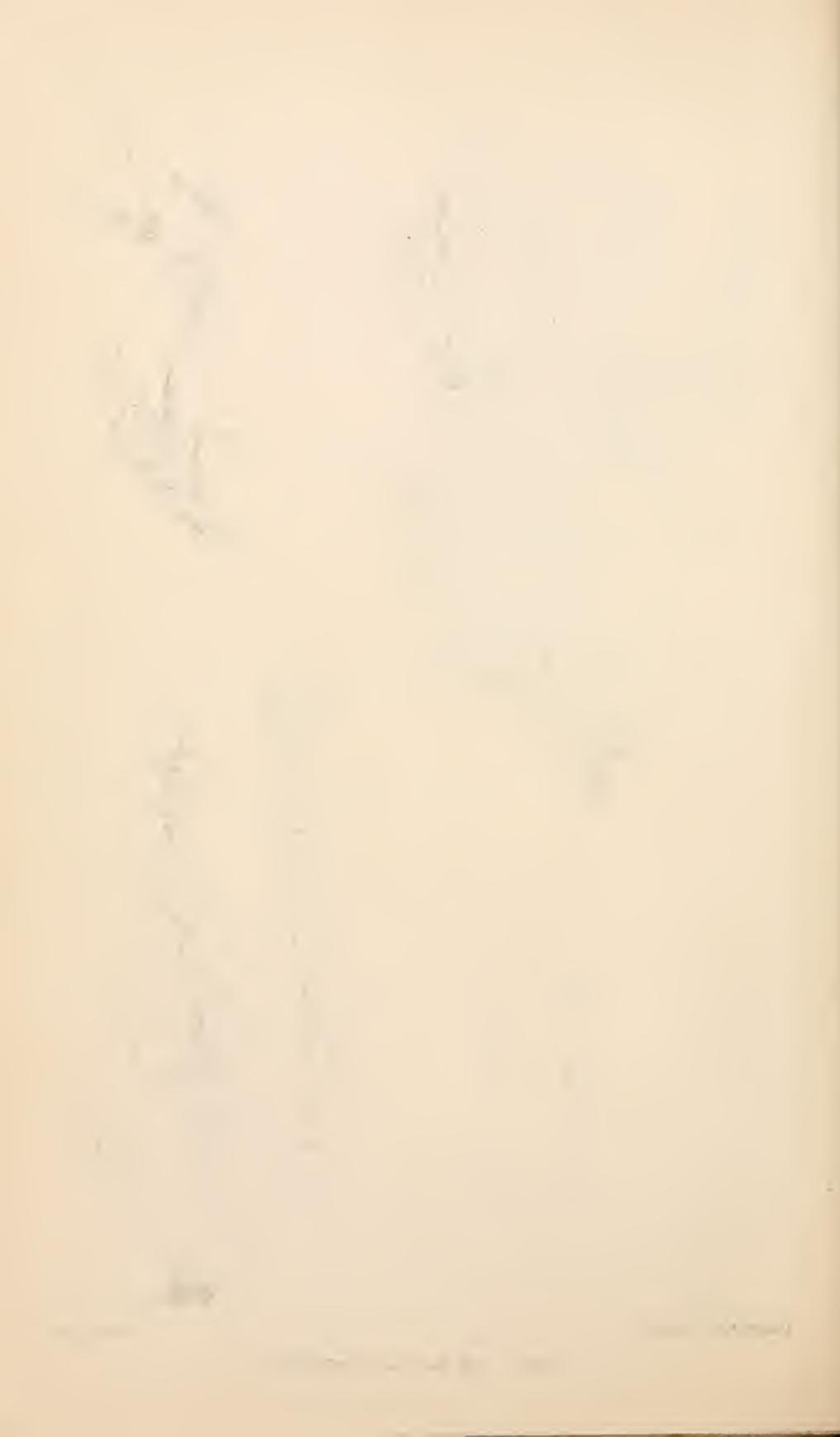


PLATE XXVII.

FIG.

OBELIA LONGISSIMA, p. 154.

- a.* Nat. size. From a drawing by Mr. T. West.
- b.* A portion enlarged (T. H.).



Tulffen West. sculp.

W. West imp.

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PLATE XXVIII.

FIG.

1. *OBELIA DICHOTOMA*, p. 156, nat. size. From a drawing by Mr. T. West.
- 1 *a*. A shoot, magnified (T. H.).—1 *b*. A capsule, magnified (T. H.).—1 *c*, 1 *d*. The gonozoid. From drawings by Mr. Alder.
2. *CAMPANULARIA EXIGUA*, p. 172, a shoot, magnified (T. H.).
- 2 *a*. The gonotheca. After Gegenbaur.

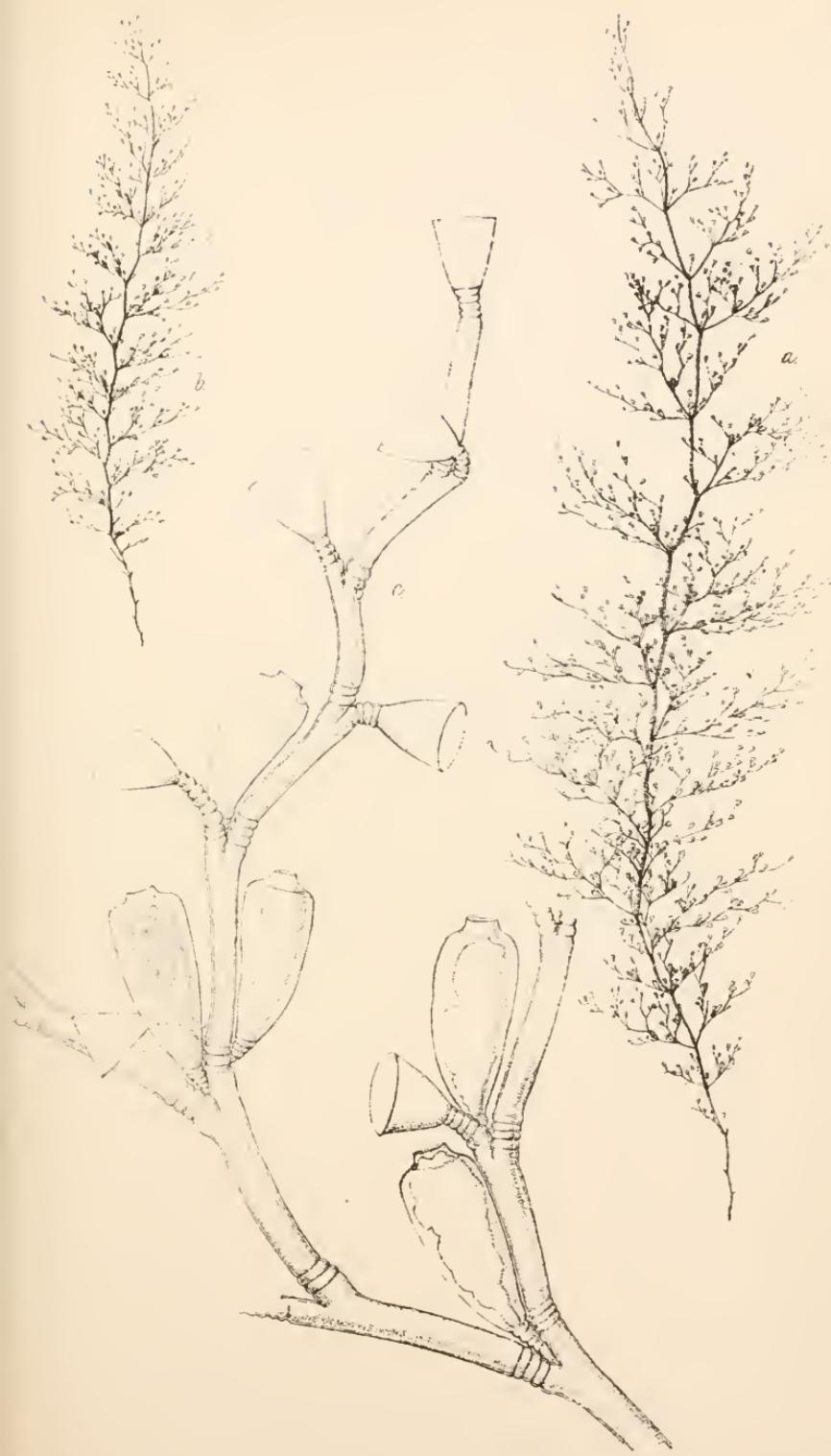


PLATE XXIX.

FIG.

OBELIA FLABELLATA, p. 157.

a, b. Nat. size. From drawings by Mr. Tuffen West.
c. A shoot, magnified (T. II.).



Tuffen West sculp.

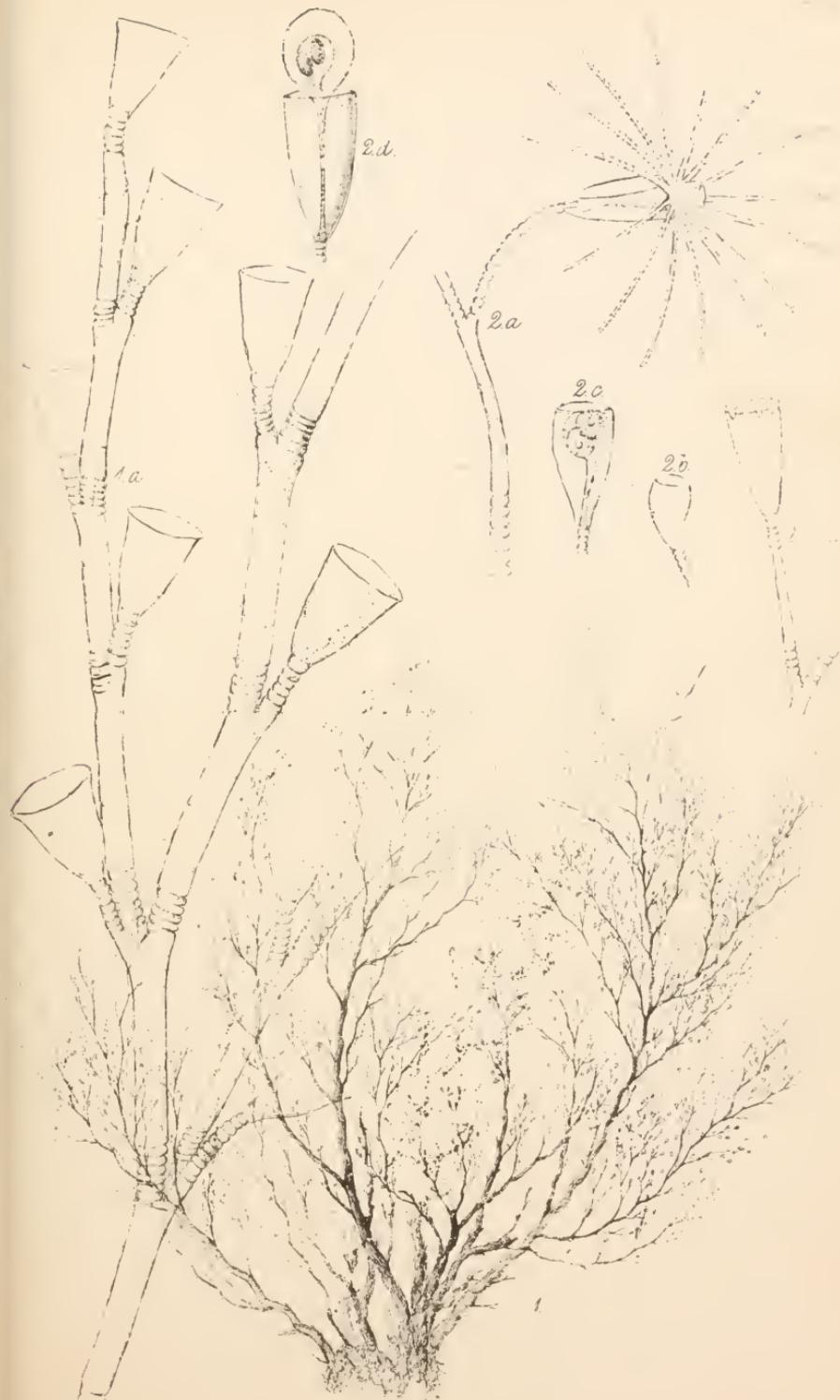
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PLATE XXX.

FIG.

1. *OBELIA PLICATA*, p. 159, nat. size. From a drawing by Mr. Tuffen West.
 - 1 *a*. A shoot, magnified (T. H.).
2. *CAMPANULARIA NEGLECTA*, p. 171, a single ealyele, magnified.
 - 2 *a*. A portion, magnified, showing the polypite. From drawings by Mr. Alder.—2 *b*, 2 *c*. The gonotheea, magnified (T. H.).—2 *d*. The same, with extra-capsular marsupium (T. H.).



Tuffen West. sculp.

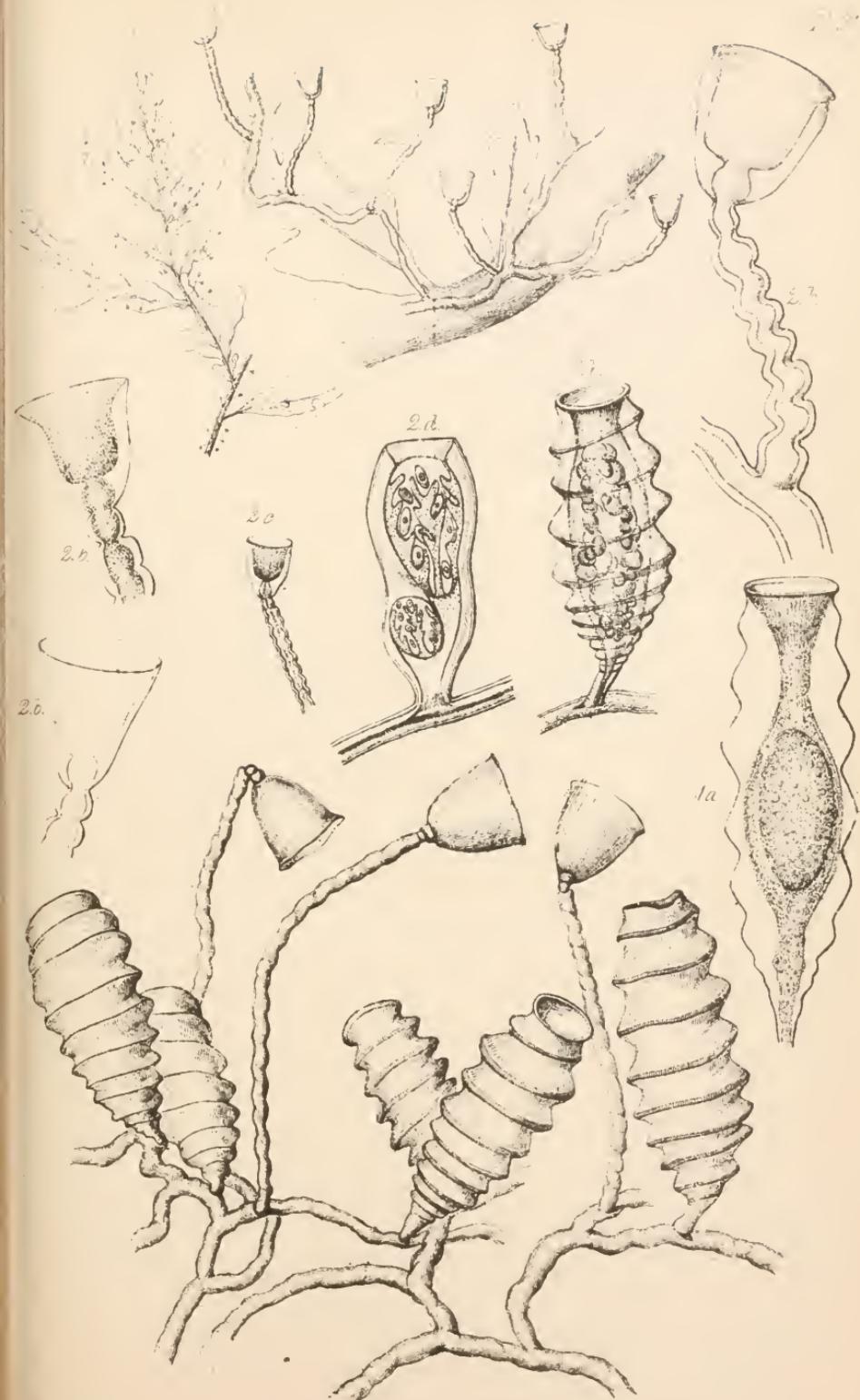
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PLATE XXXI.

FIG.

1. *CAMPANULARIA INTEGRA*, p. 163, magnified. After Tuffen West.
- 1 *a*, 1 *b*. The gonotheca, magnified to show the internal structure (T. H.).
2. *CAMPANULARIA CALICULATA*, p. 164, on red weed, nat. size.
- 2 *a*. The same, magnified.—2 *b*. Calycles, highly magnified to show the structure and differences in shape. After Tuffen West.—2 *c*. A calycle, drawn to the Author's scale for comparison with other species (T. H.).—2 *d*. The gonotheca, magnified. After Allman.



Tuffen. West sculp.

W. West, imp.

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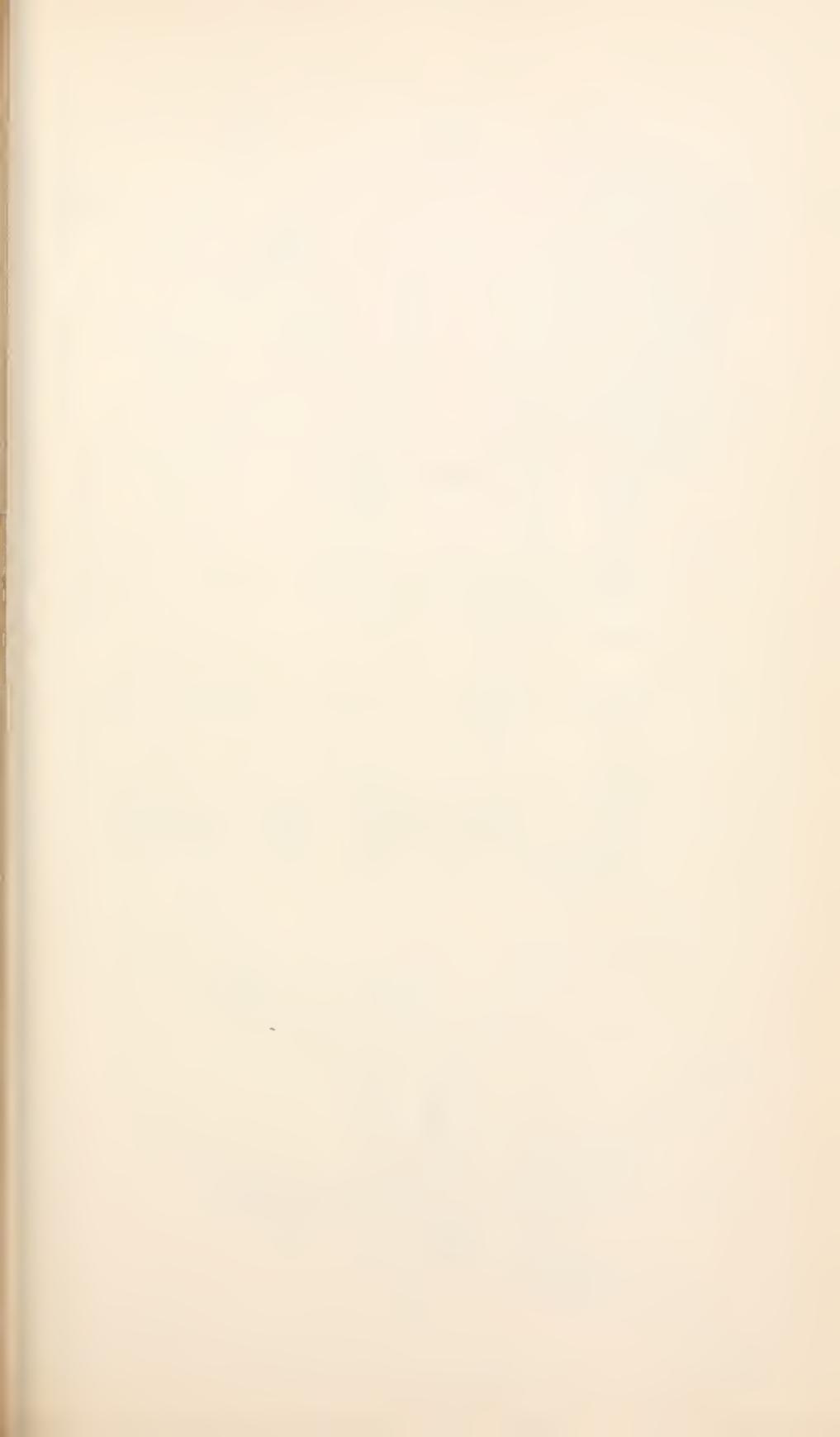
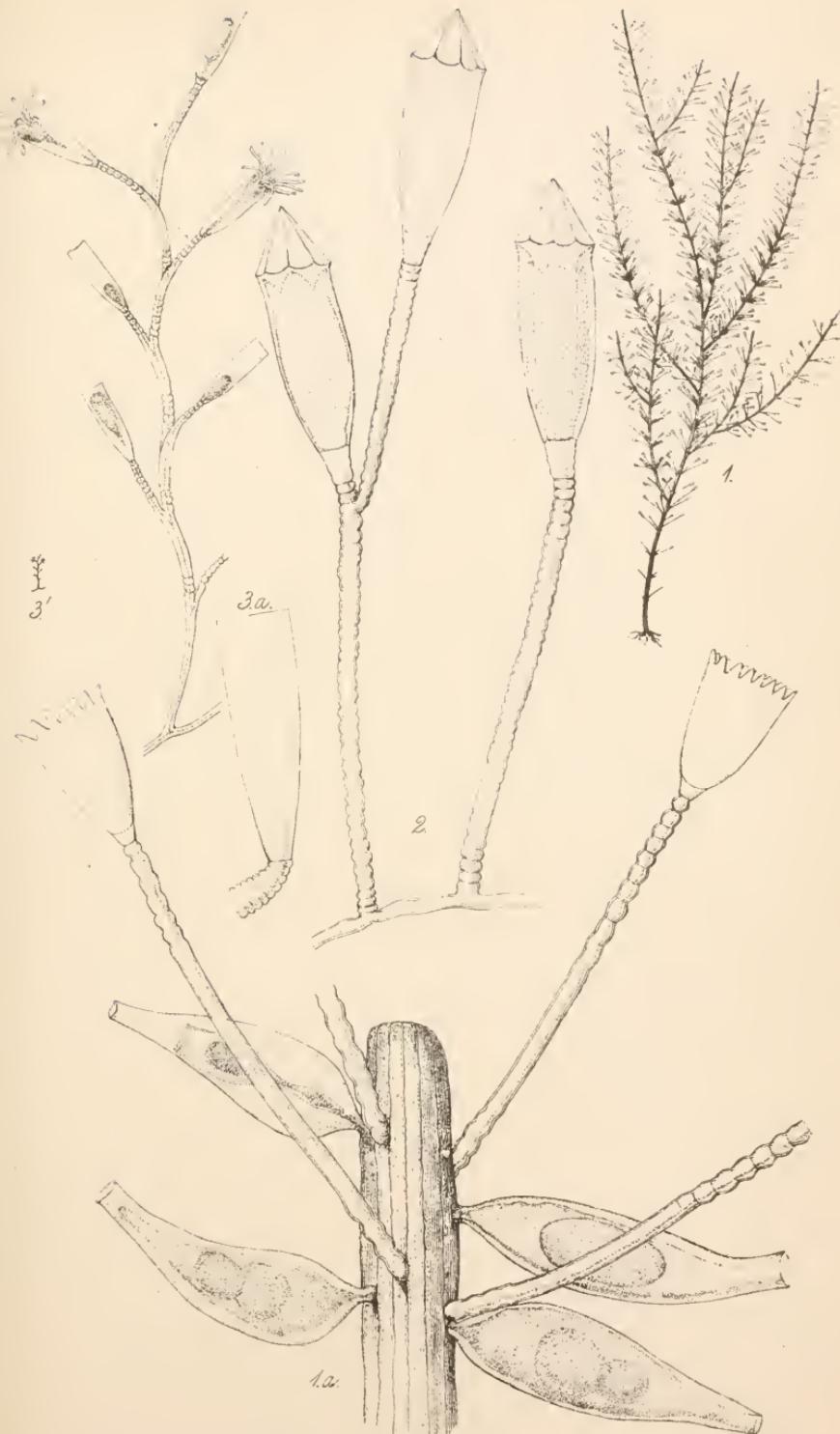


PLATE XXXII.

FIG.

1. *CAMPANULARIA VERTICILLATA*, p. 167, nat. size. From a drawing by Mr. Tuffen West.
1 a. The same, magnified (T. H.).
2. *LOVENELLA CLAUSA*, p. 177, magnified. From a drawing by the Author.
3. *CAMPANULARIA? FRAGILIS*, p. 175, nat. size.
3 a. A shoot of the same, magnified.—3 b. A single calyx, more highly magnified. From drawings by the Author.



Tussen West sculp.

W. West imp..

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PLATE XXXIII.

FIG.

CAMPANULARIA FLEXUOSA, p. 168.

a. Natural size.

b. A shoot, magnified, bearing male capsules.

c. A shoot with female capsules.



sten West sculp.

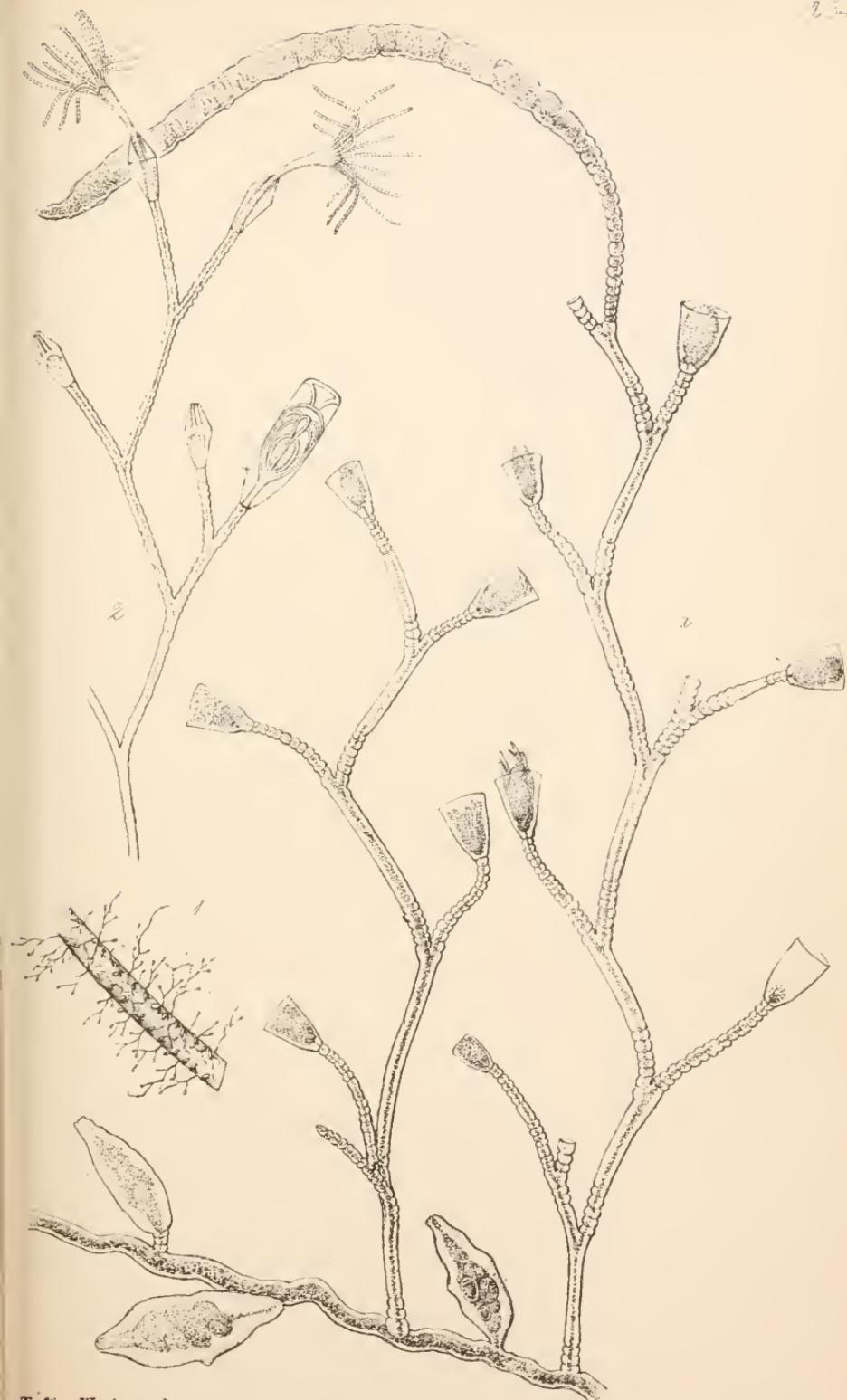
W. West imp.

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PLATE XXXIV.

FIG.

1. *CAMPANULARIA ANGULATA*, p. 170, nat. size.
1 a. A portion, magnified. After Tuffen West.
2. *LEPTOSCYPHUS TENUIS*, p. 197, magnified. From a drawing by Prof. Allman.



Tuften West. sculp.

W. West imp.

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PLATE XXXV.

FIG.

1. *CAMPAÑULARIA?* *GIGANTEA*, p. 174, nat. size.
1 *a*, 1 *b*. Calycles magnified. These two figures are drawn to the same scale.
2. *GONOTHYRÆA?* *HYALINA*, p. 184, nat. size.
2*a*. A shoot, magnified.



Tufton West sculp.

W. West imp.

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PLATE XXXVI.

FIG.

1. *GONOTHYREA GRACILIS*, p. 183, nat. size.
1 a. The same, magnified. From drawings by the Author.
- 1'. *G. GRACILIS*, nat. size. After Sars.—1 b. The gonotheca (female). After Sars.
2. *CAMPANULINA TURRITA*, p. 190, magnified. From a drawing by Prof. Wyville Thomson.

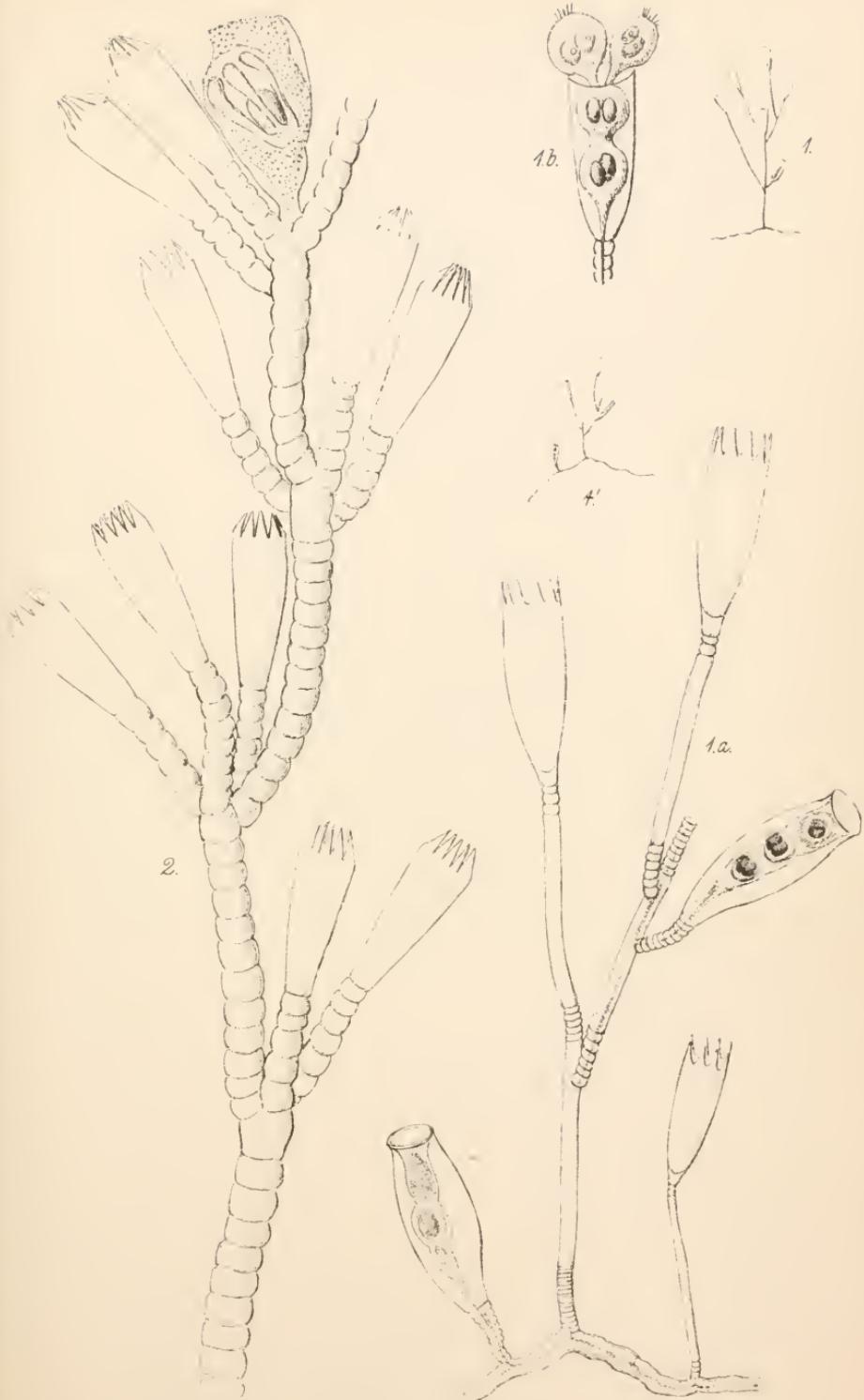
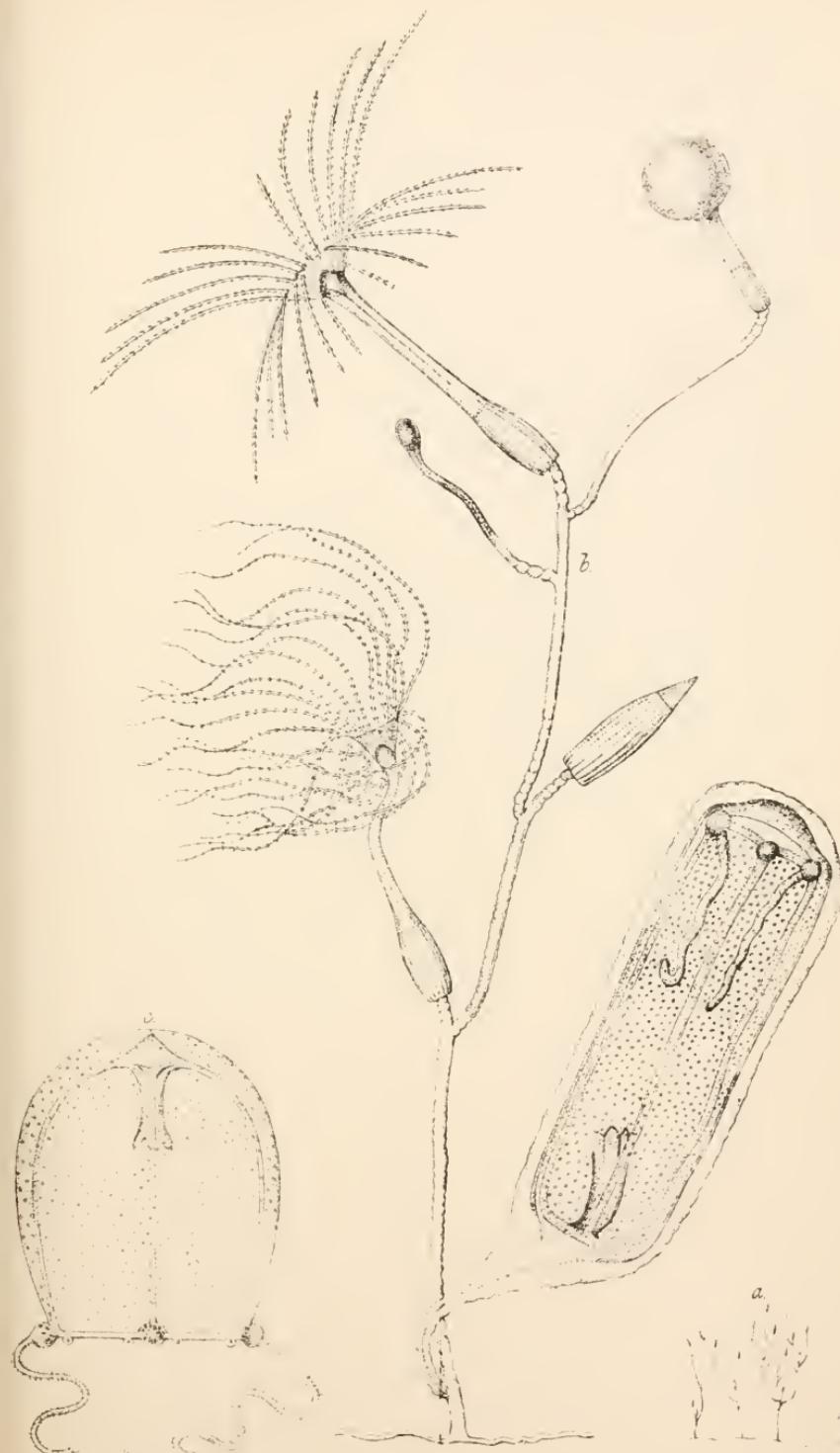


PLATE XXXVII.

FIG.

CAMPANULINA ACUMINATA, p. 187.

a. Nat. size.—*b.* A shoot, magnified.—*c.* The gonozoid.
After Dr. Strehill Wright.



Tuffen West sculp.

W. West imp.

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PLATE XXXVIII.

FIG.

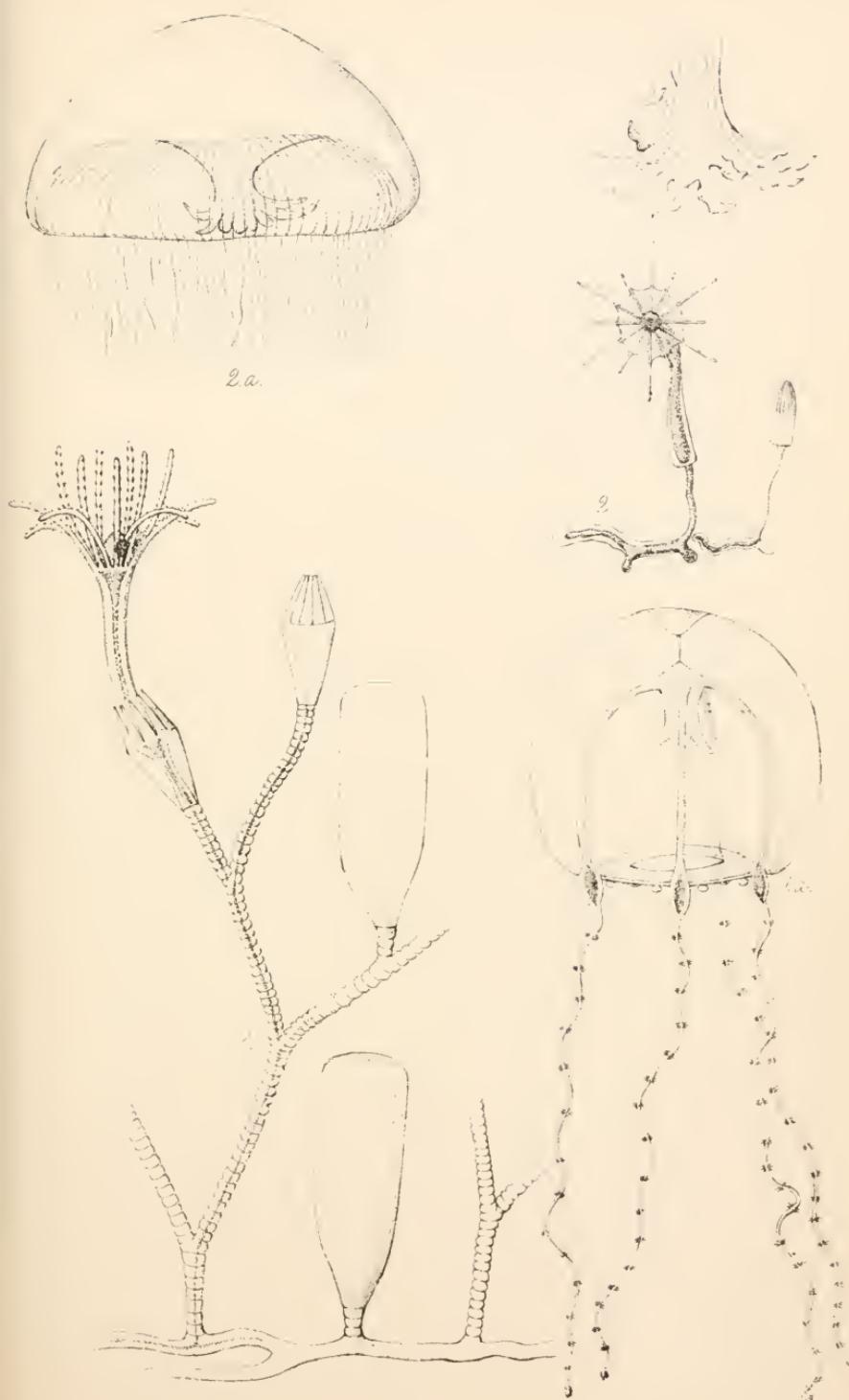
1. *CAMPANULINA REPENS*, p. 189, magnified.

1 *a*. The gonozoid. From drawings by Prof. Allman.

2. *ZYGODACTYLA VITRINA*, p. 192, the polypites, magnified.

After Wright.

2 *a*. The gonozoid. After Gosse.—2 *b*. The oral extremity of the manubrium, magnified, showing the fimbriated lips. After Gosse.



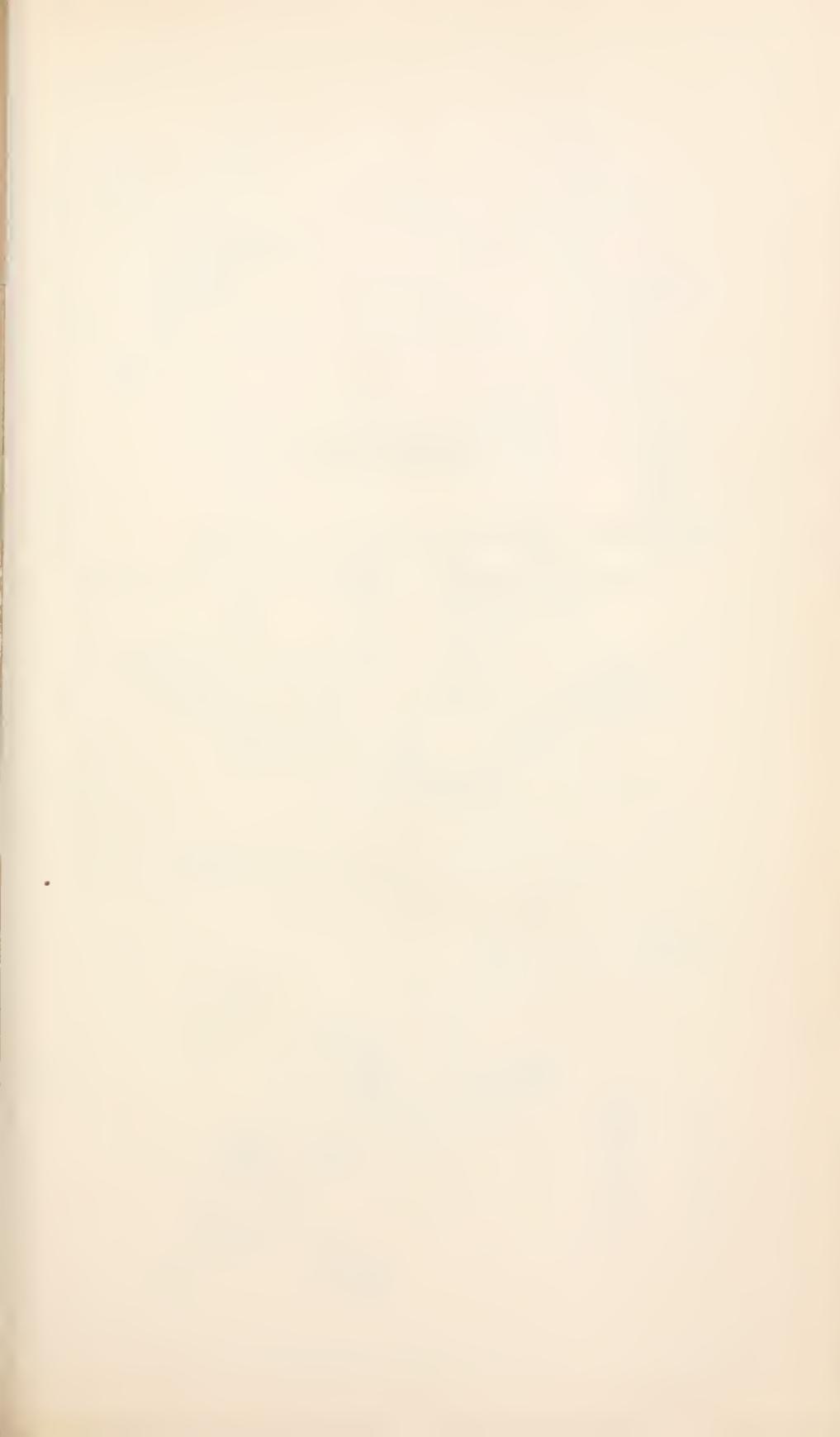
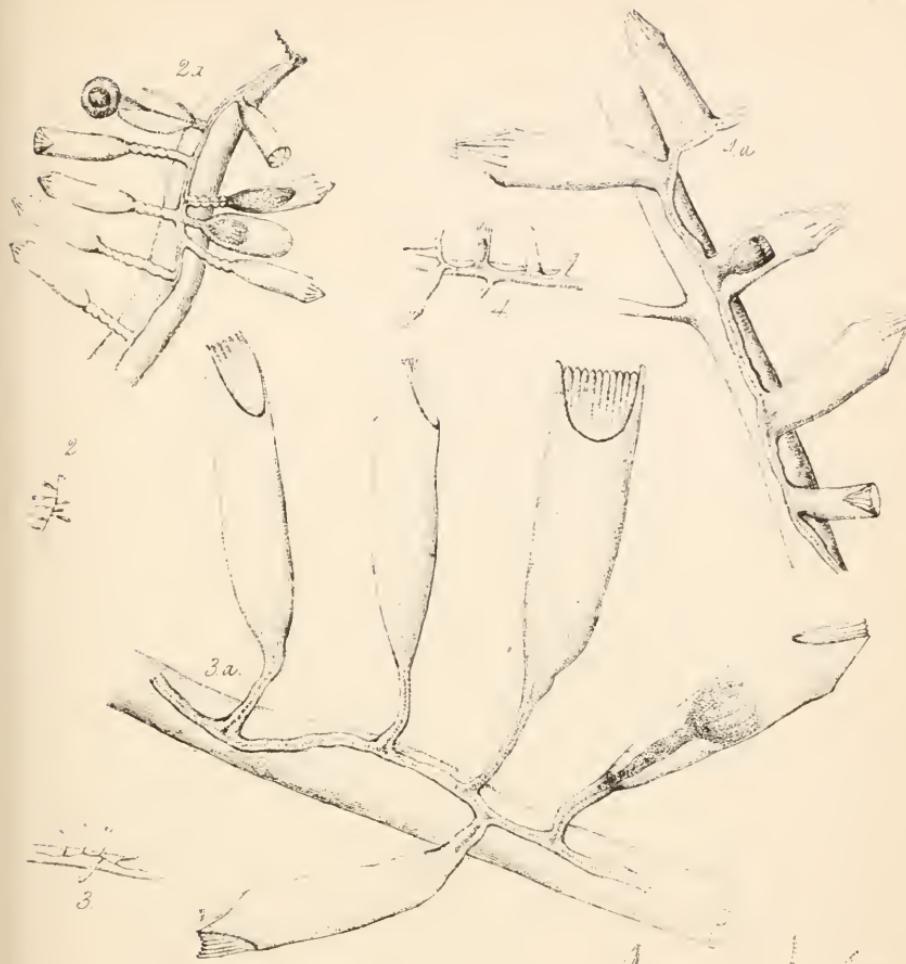


PLATE XXXIX.

FIG.

1. *OPERCULARELLA LACERATA*, p. 194, nat. size.
- 1a. A shoot, magnified. The Author.—1b, 1c. The male capsules. After Wright.
2. *CALYCELLA SYRINGA*, p. 206, nat. size.
- 2a. The same, magnified.
3. *CALYCELLA FASTIGIATA*, p. 208, nat. size.
- 3a. The same, magnified.
4. *CUSPIDELLA HUMILIS*, p. 209, magnified to the same scale as the preceding.
- 4a. The same, more highly magnified.



Tussten West sculp.

W. West unsp.

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PLATE XL.

FIG.

1. *LAFOËA PARVULA*, p. 203, nat. size.
- 1 *a*, 1 *b*. The same, magnified. After Tuffen West.
2. *LAFOËA POCILLUM*, p. 204, magnified.—2 *a*, 2 *b*, 2 *c*. The same, more highly magnified.
3. *LAFOËA PYGMÆA*, p. 205, magnified.
- 3 *a*, 3 *b*. The same, more highly magnified.
4. *CUSPIDELLA GRANDIS*, p. 210, highly magnified*.
5. *CUSPIDELLA COSTATA*, p. 210, drawn to the same scale as *CUSPIDELLA GRANDIS*.
- 5 *a*. The same, more highly magnified.

* This figure is drawn to the same scale as the larger figure (4 *a*) of *CUSPIDELLA HUMILIS* on Plate XXXIX.

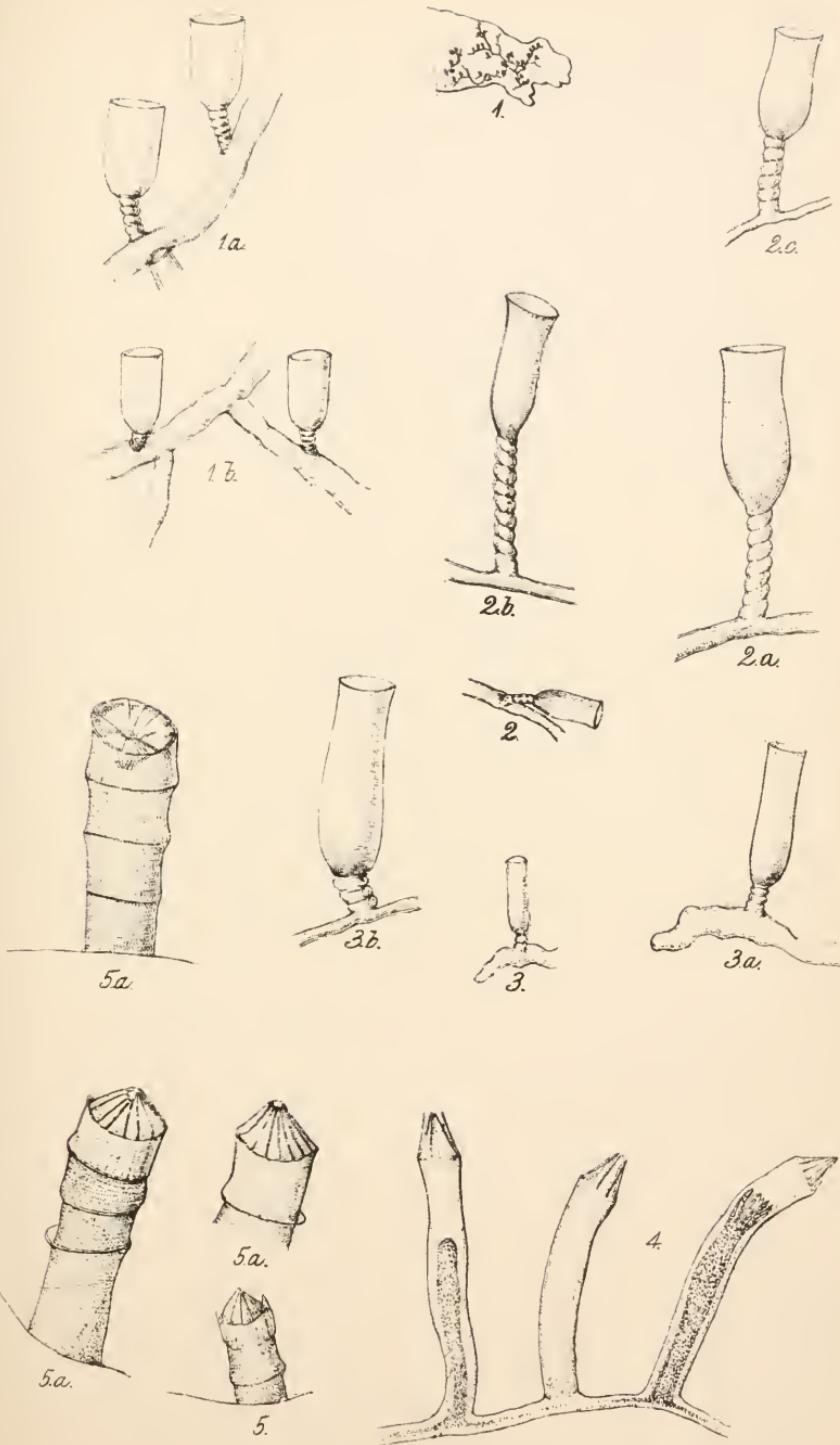
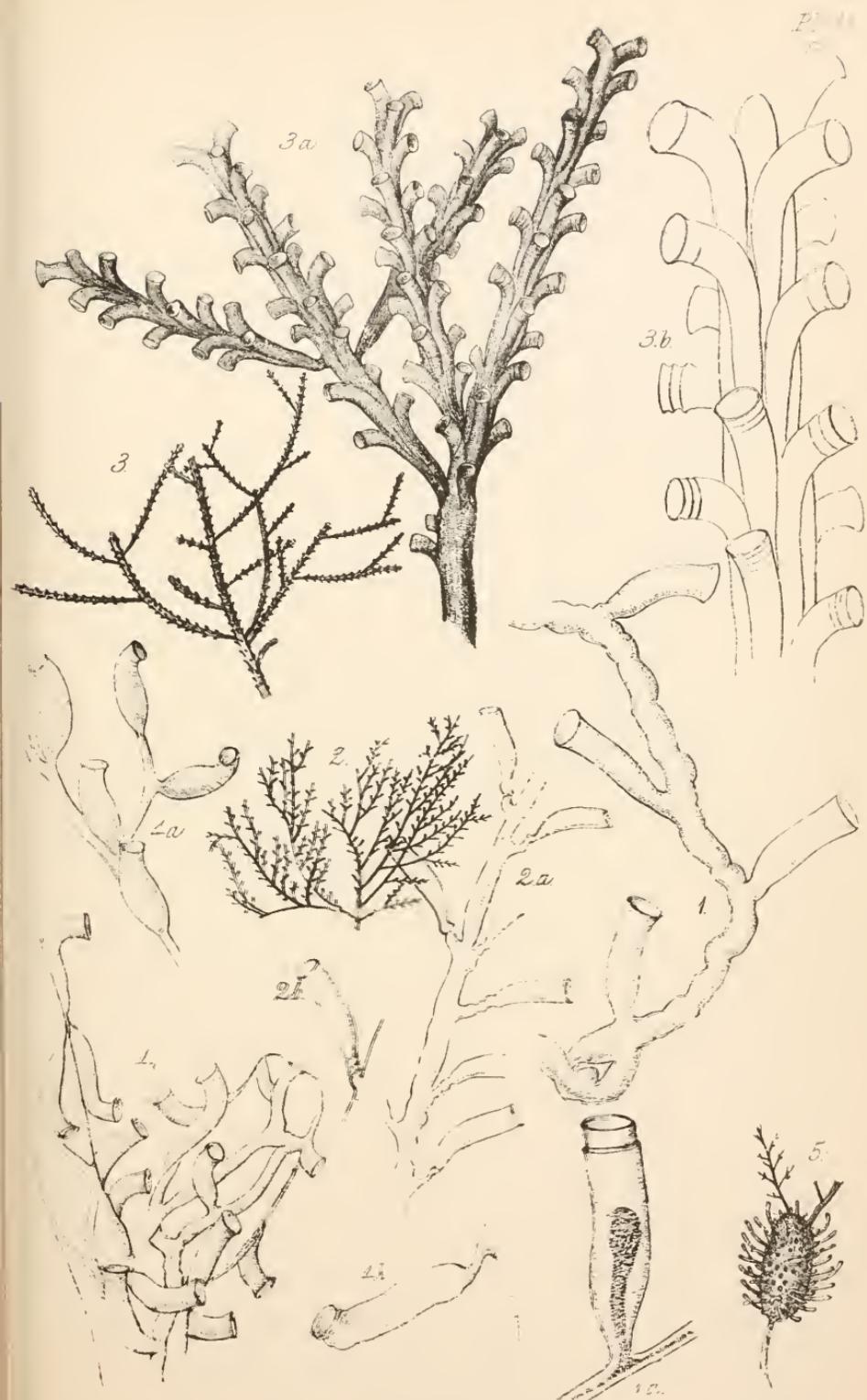


PLATE XLI.

FIG.

1. *LAFOËA DUMOSA*, p. 200, magnified.
 - 1a. The same, a single calycle, more highly magnified (T. H.)
2. *LAFOËA FRUTICOSA*, p. 202, nat. size. After Alder.
 - 2a. A portion, magnified (T. H.).—2b. The northern form of *L. fruticosa*, magnified (T. H.).
3. *SALACIA ABIEGINA*, p. 212, nat. size.
 - 3a. The same, magnified.—3b. A portion of the stem, more highly magnified. After Alder.
4. *FILELLUM SERPENS*, p. 214, magnified.
 - 4a. A group of calycles. From drawings by Mr. Alder.—4b. A single calycle. From a sketch by Mr. Busk.
5. *COPPINIA ARCTA*, p. 219, nat. size. From a drawing by the Author.



Tufted West. sough.

W Westump

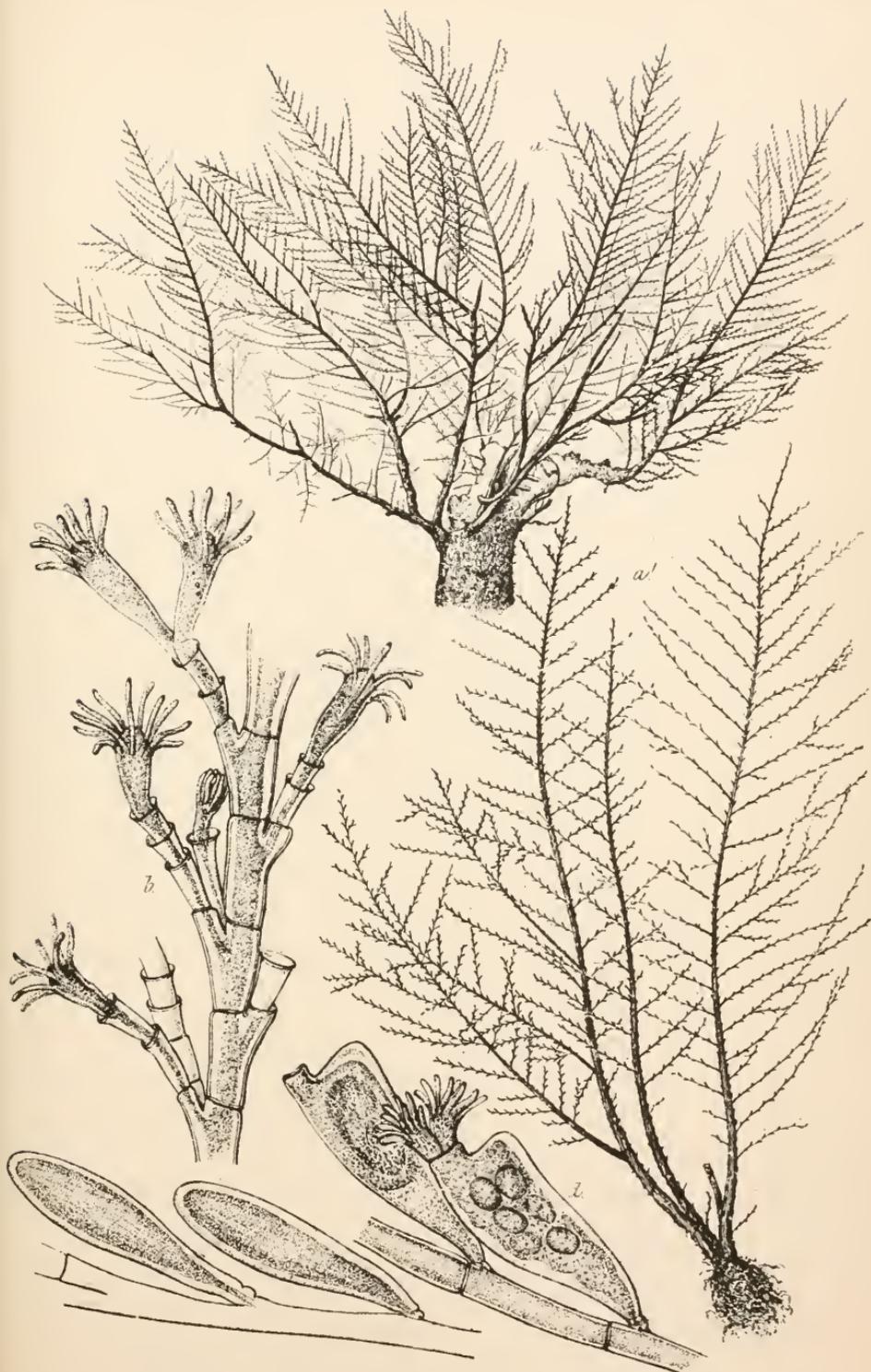
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PLATE XLII.

FIG.

HALECIMUM HALECINUM, p. 221.

- a, a'*. Nat. size. From drawings by Mr. T. West.
- b*. A portion, magnified, showing the polypites.
- c*. Capsules with male gonophores.
- d*. Capsules with female gonophores. From drawings by the Author.



Tulffen West. sculp.

W. West. imp.

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PLATE XLIII.

FIG.

1. *HALECIMUM MURICATUM*, p. 223, nat. size. From a drawing by Mr. T. West.
1a. Portions, magnified (T. H.).—*1b.* *Gonotheca* (T. West).
2. *HALECIMUM BEANII*, p. 224, nat. size. From a drawing by Mr. Tuffen West.
2a. Portions, magnified.—*2b.* A branch with male capsules.—*2c.* A branch with female capsules. From drawings by the Author.



Tiffen West. sculp.

W. West. 1mp.

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PLATE XLIV.

FIG.

1. *HALECIMUM LABROSUM*, p. 225, nat. size.

1a. A portion, magnified, with male capsules. After Alder.

2. *HALECIMUM SESSILE*, p. 229, nat. size.

2a. A portion, magnified, showing the great length of the polypite. From drawings by Mr. Alder.

3. *HALECIMUM BEANII* (?), p. 324 (Appendix), nat. size.

3a. A portion of the stem, enlarged.—3b. A capsule.—

3c. A single calyele, more highly magnified. From drawings by the Author.



Tuffen West. sculp.

W. West. imp.

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PLATE XLV.

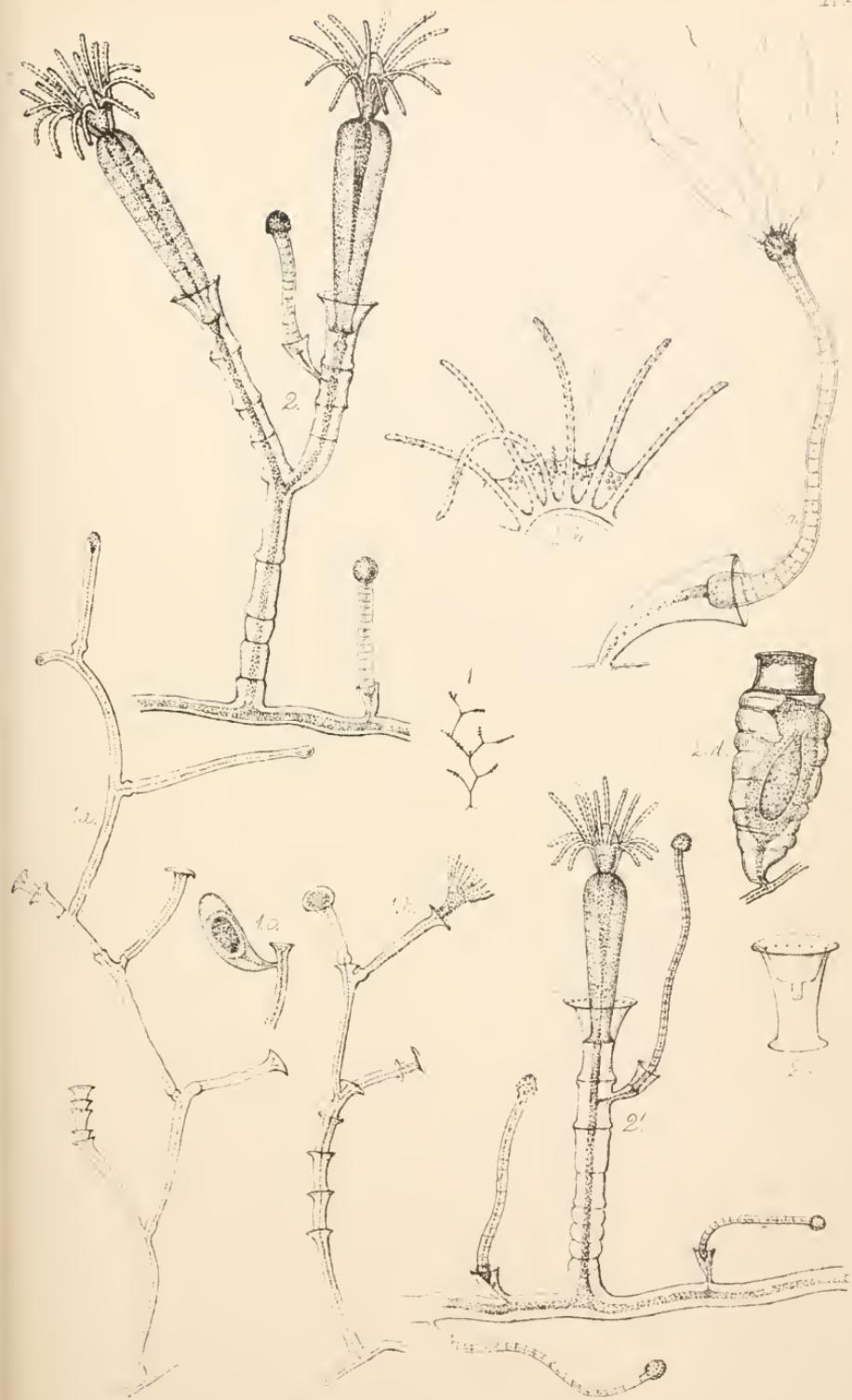
FIG.

1. *HALECIUM TENELLUM*, p. 226, nat. size.

1 *a*, 1 *b*. Portions, magnified.—1 *c*. The gonotheca.

2, 2'. *OPHIODES MIRABILIS*, p. 231, magnified.

2 *a*. One of the snake-like appendages.—2 *b*. A portion of the intertentacular web, with clusters of thread-cells between the arms.—2 *c*. A ealycle, magnified, showing the diaphragm on which the polypite rests.—2 *d*. The gonotheca.



Tuffen West sculp.

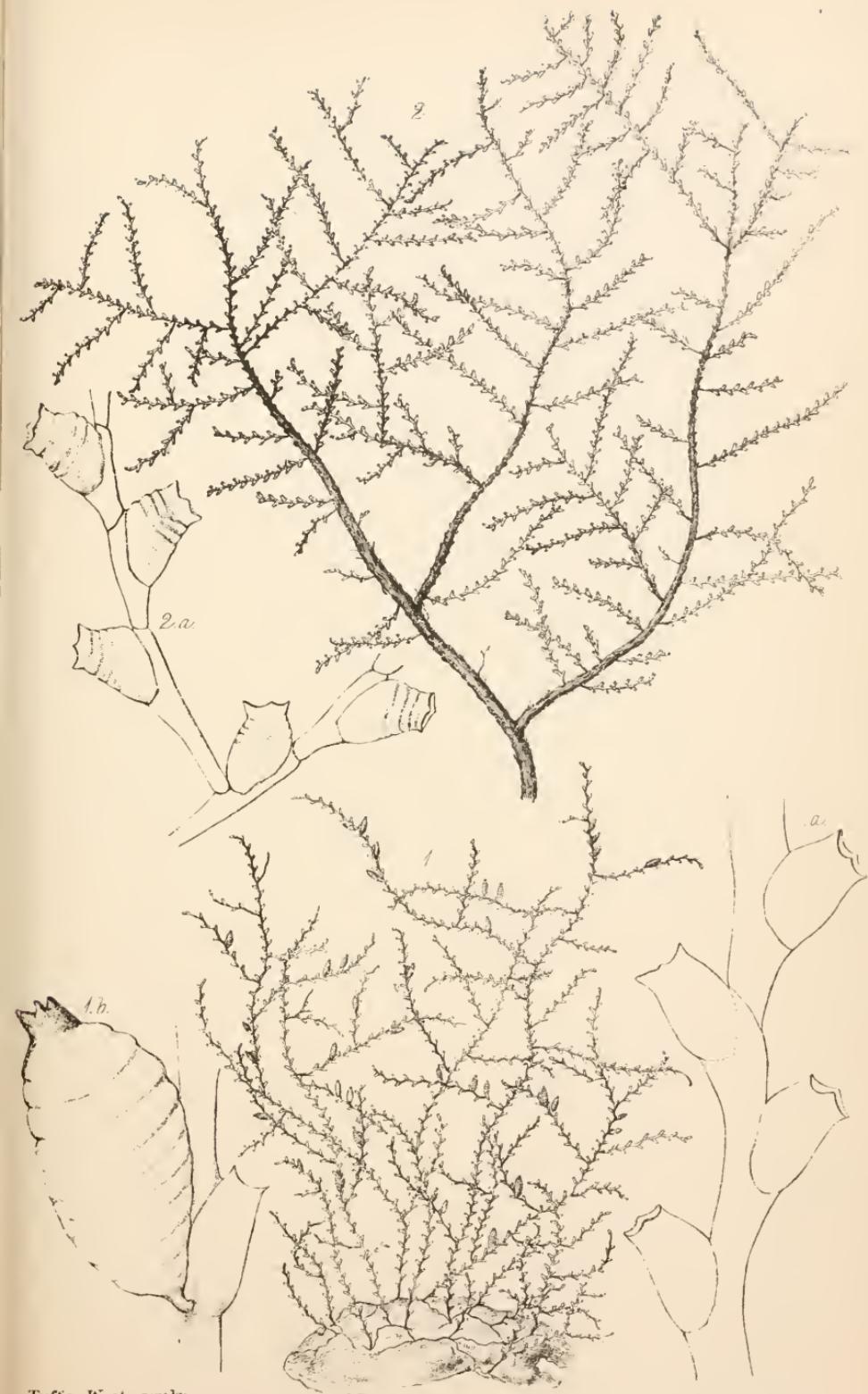
W. West imp.

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PLATE XLVI.

FIG.

1. *SERTULARELLA POLYZONIAS*, p. 235, nat. size. From a drawing by Mr. T. West.
1 a. A portion, magnified (T. H.).—1 b. The gonotheca (T. H.).
2. *SERTULARELLA GAYI*, p. 237, nat. size.
2 a. A portion, enlarged. From drawings by Mr. Alder.



Tuften West sculp.

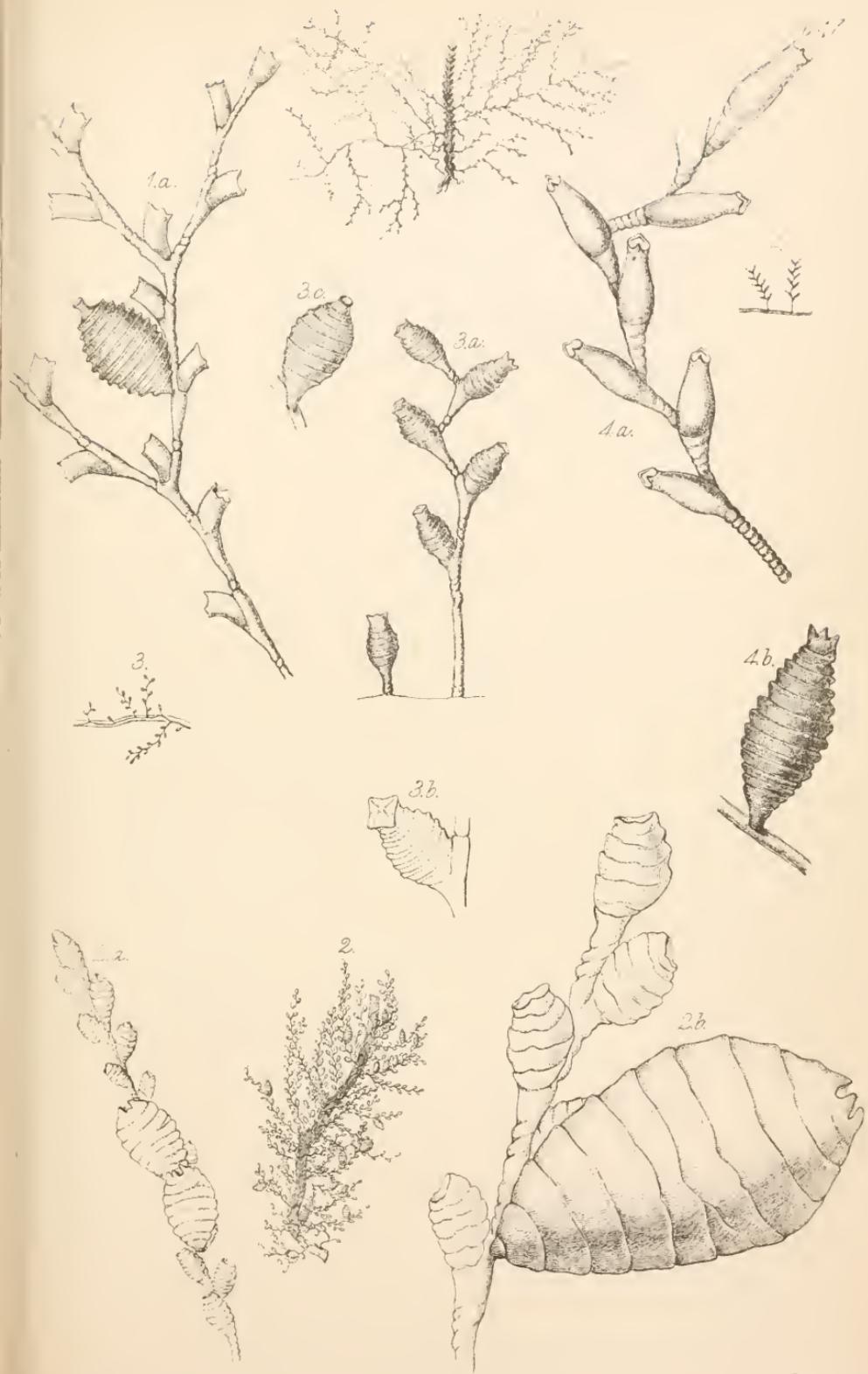
W. West imp.

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PLATE XLVII.

FIG.

1. *SERTULARELLA TRICUSPIDATA*, p. 239, nat. size.
1 *a*. The same, enlarged. After Alder.
2. *SERTULARELLA RUGOSA*, p. 241, nat. size.
2 *a*. The same, magnified.—2 *b*. A portion, more highly magnified. From drawings by Mr. Tuffen West.
3. *SERTULARELLA TENELLA*, p. 242, nat. size.
3 *a*. The same, magnified.—3 *b*. A single calycle, more highly magnified.—3 *c*. The gonotheca. After Alder.
4. *SERTULARELLA FUSIFORMIS*, p. 243, nat. size.
4 *a*. A portion, magnified.—4 *b*. The gonotheca. From drawings by the Author.



Tuffen West. sculp.

W. West imp.

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PLATE XLVIII.

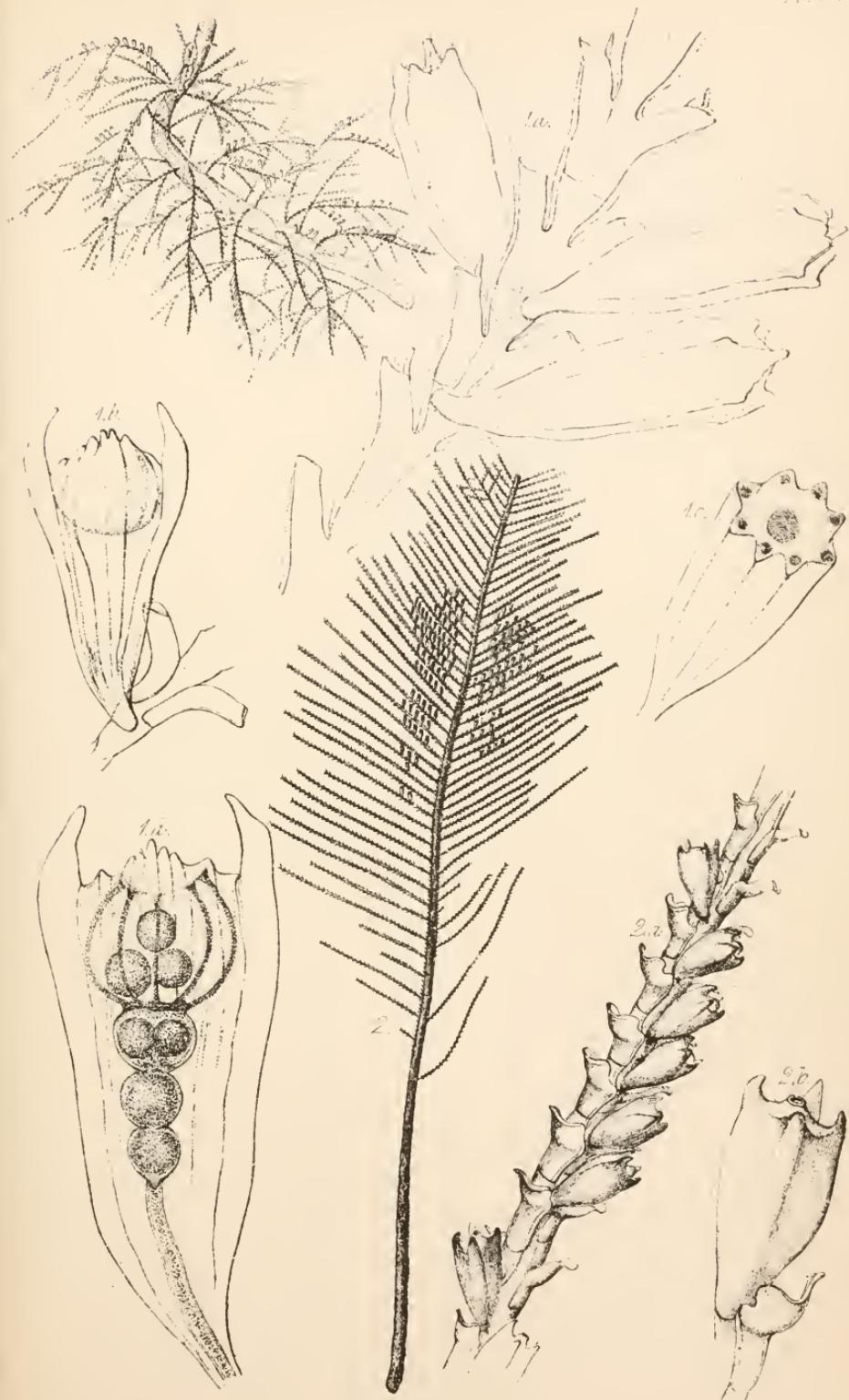
FIG.

1. *DIPHASIA ROSACEA*, p. 245, nat. size.

1 *a*. A portion with male capsules, magnified. From drawings by Mr. Tuffen West.—1 *b*. Female capsule, magnified (T. H.). Ditto, more highly magnified to show the gonophores and internal marsupium (T. H.).—1 *c*. A capsule in an early stage of development (T. H.).

2. *DIPHASIA ALATA*, p. 258, nat. size.

2 *a*. A branch, magnified.—2 *b*. The capsule (male). After Tuffen West.



Tuften West sculp.

W. West imp.

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PLATE XLIX.

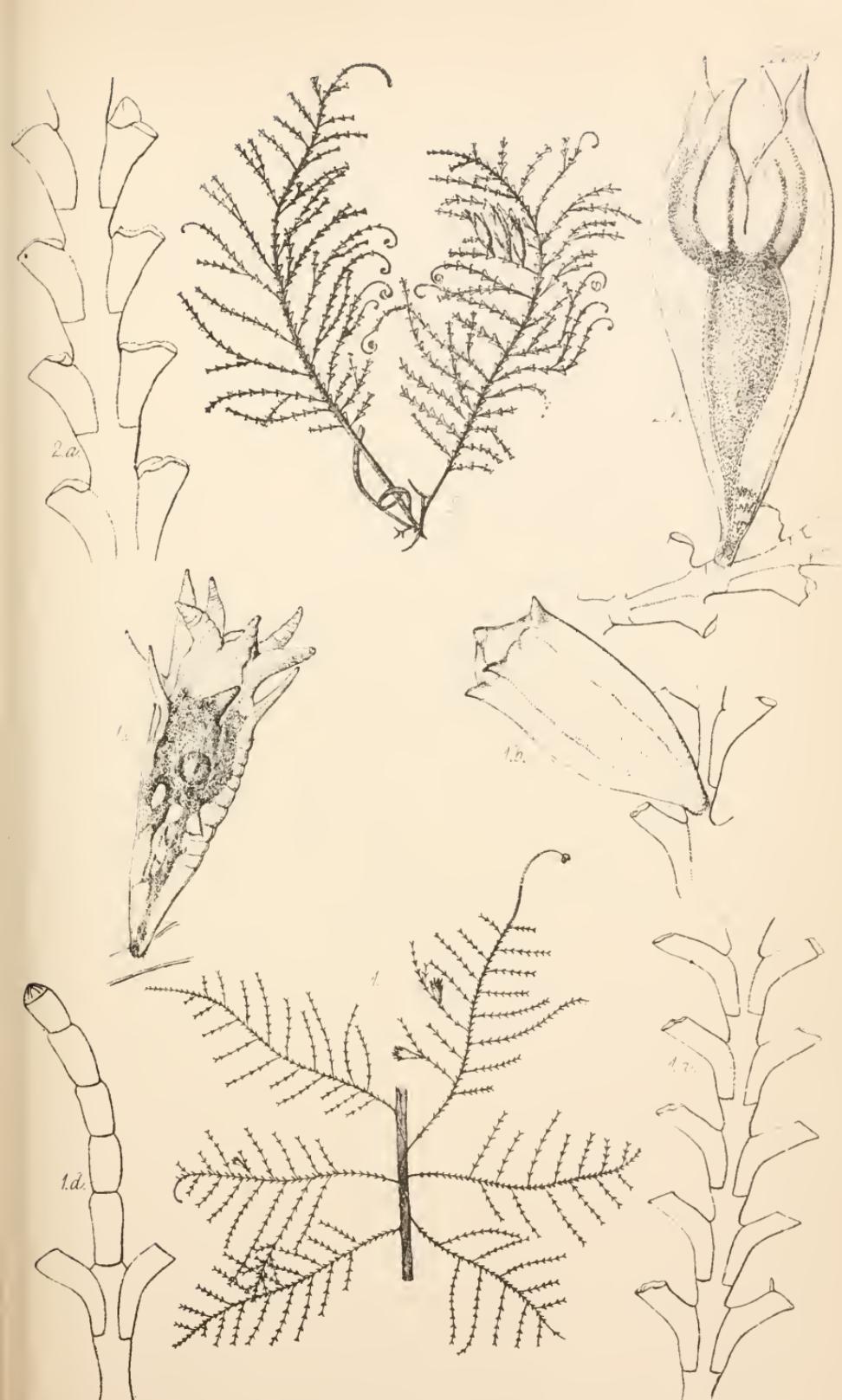
FIG.

1. *DIPHASIA ATTENUATA*, p. 247, nat. size.

1 *a*. Part of a branch, magnified.—1 *b*. The male capsule.
1 *c*. The female capsule.—1 *d*. One of the tendrillike extremities of the shoots.

2. *DIPHASIA FALLAX*, p. 249, nat. size.

2 *a*. Part of a branch, magnified.—2 *b*. The capsule (female).



Tusken West. sculp.

W. West imp



PLATE L.

FIG.

1. *DIPHASIA PINASTER*, p. 252, nat. size.

1 *a*. A portion bearing a male capsule, magnified.—1 *b*. The female capsule, magnified.

2. *SERTULARIA FUSCA*, p. 272, nat. size.

2 *a*. Calycles, magnified.—2 *b*. Gonothecæ. The last figure is after Johnston.



Tuffen West. sculp.

W. West. imp.

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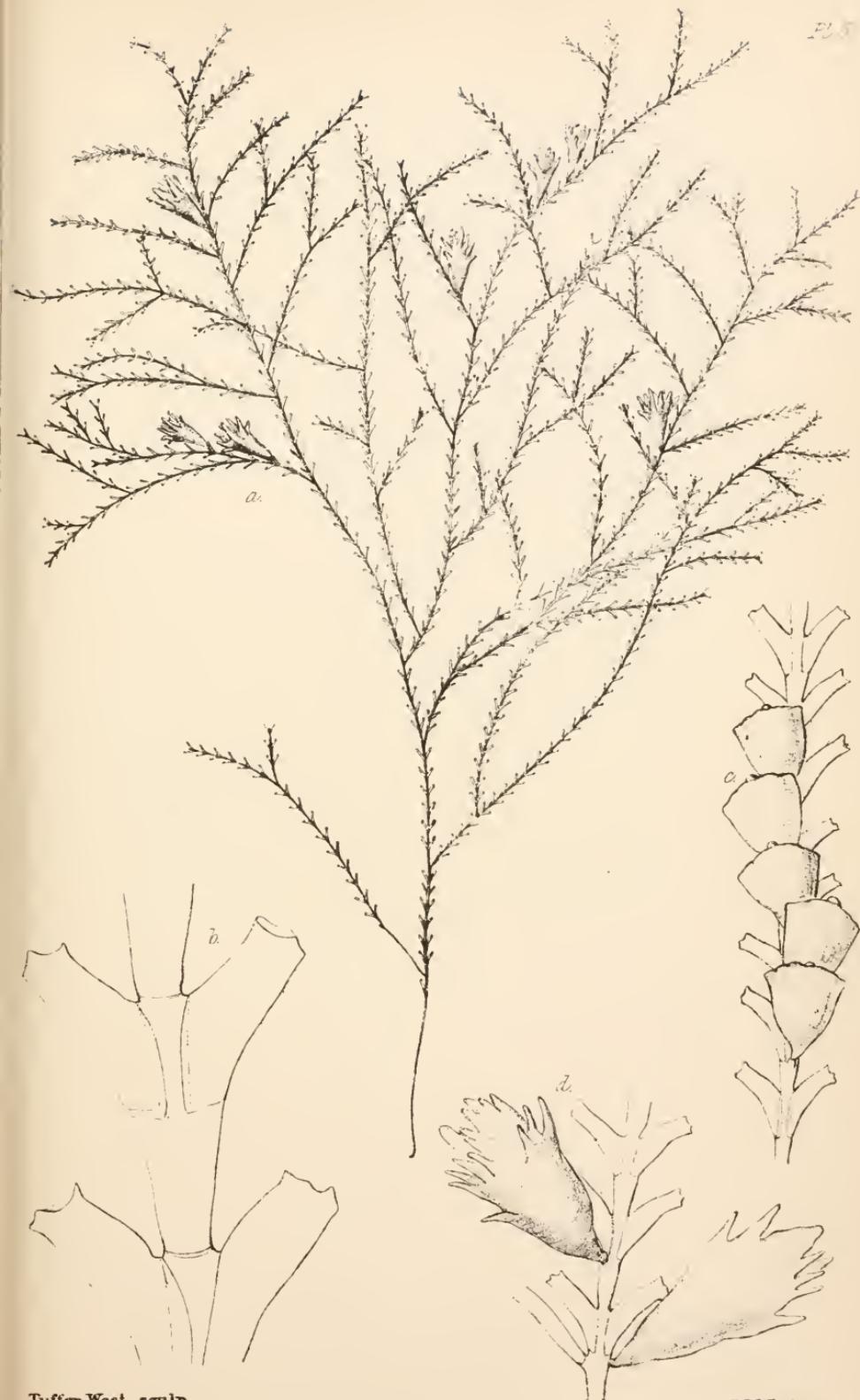


PLATE LI.

FIG.

DIPHASIA TAMARISCA, p. 254.

- a.* Natural size.
- b.* Calyeles, magnified.
- c.* A branch with male capsules.
- d.* A branch with female capsules.



Tussen West sculp.

PL 5

W. West imp.

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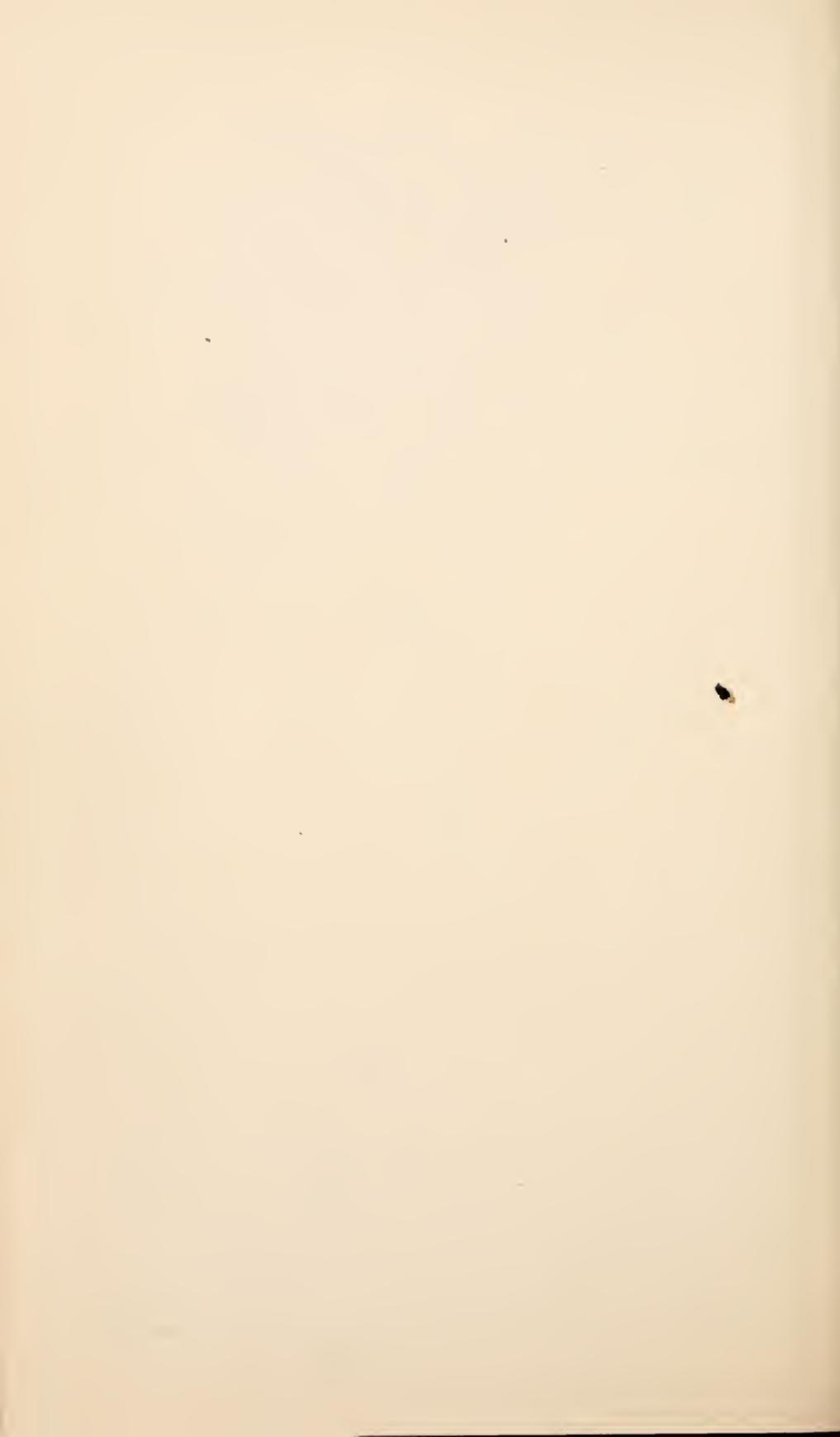


PLATE LII.

FIG.

DIPHASIA PINNATA, p. 255.

- a.* Natural size (male).
- b.* Ditto (female).
- c.* Calyces, magnified.
- d.* Male capsule.
- e.* Female capsule.

From drawings by Mr. Tuffen West.



Tuffen West. sculp.

W. West. imp.

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PLATE LIII.

FIG.

1. *SERTULARIA PUMILA*, p. 260, nat. size.

1 *a*. Portion, magnified.—1 *b*. The capsule, magnified.—1 *c*. The same, in a more advanced stage, with the external marsupium. After Lindström. The other figures are by the Author.

2. *SERTULARIA GRACILIS*, p. 262, nat. size.

2 *a*, 2 *a'*. Portions, enlarged.—2 *b*. The capsule. From drawings by the Author.

3. *SERTULARIA FILICULA*, p. 264, nat. size. From a drawing by Mr. T. West.

3 *a*. Portion, magnified (T. H.).—3 *b*. The capsule. After Ellis.



T. West sculp.

W. West imp.

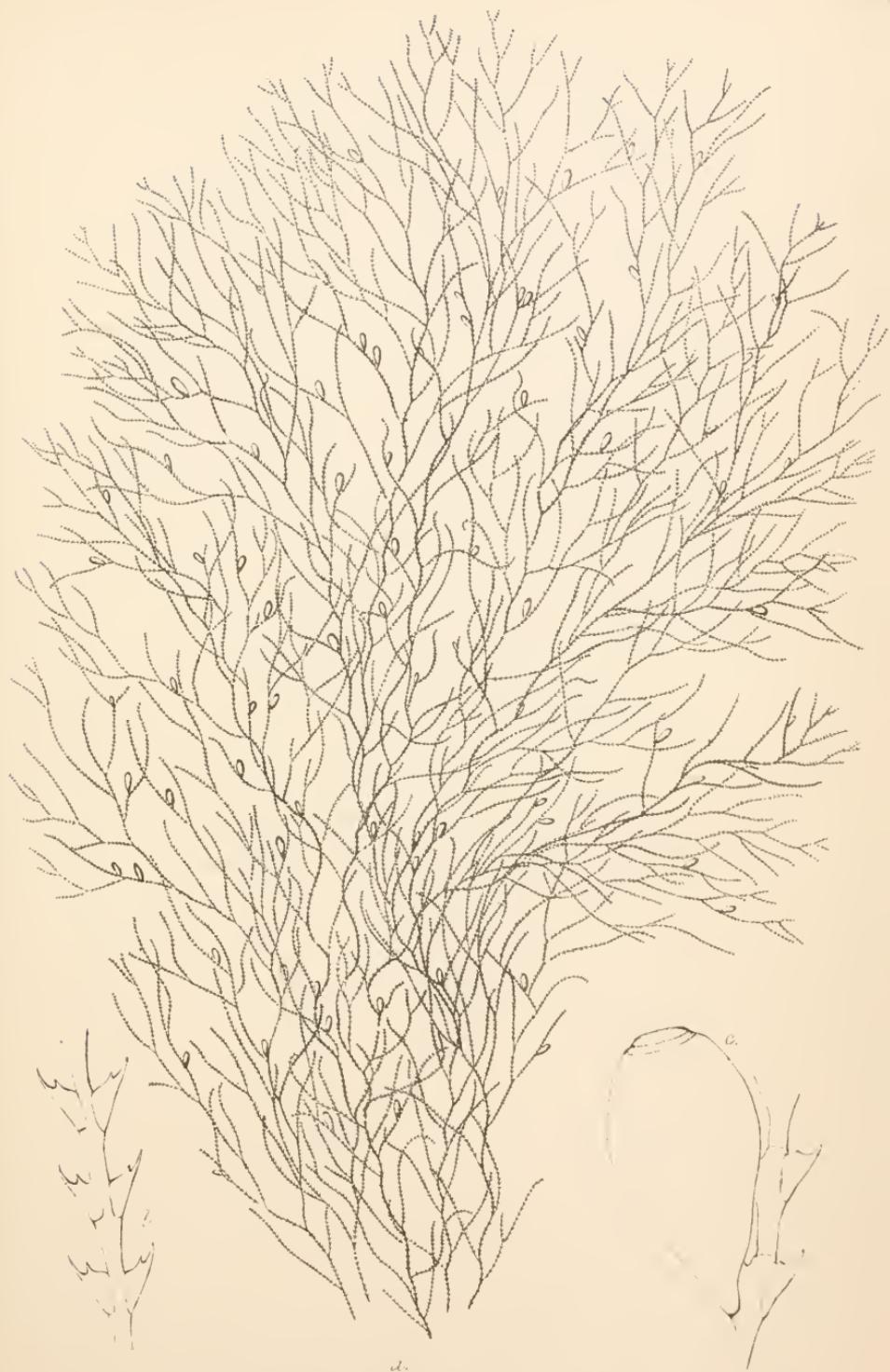
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PLATE LIV.

FIG.

SERTULARIA OPERCULATA, p. 263.

- a.* Nat. size. From a drawing by Mr. Tuffen West.
- b.* Calyeles, magnified (T. H.).
- c.* The capsule (T. H.).



Tiffen West sculp.

W. West imp.

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PLATE LV.

FIG.

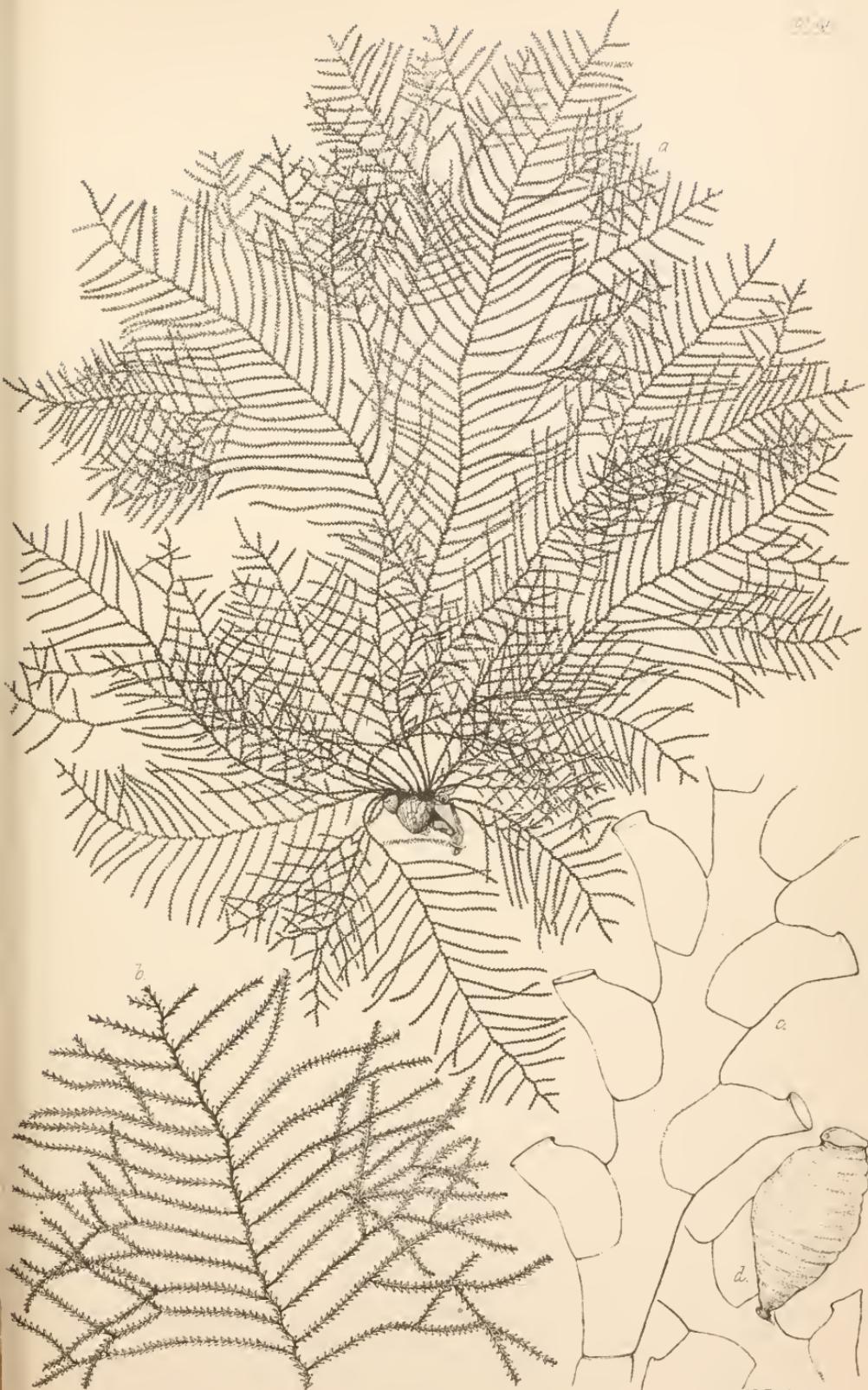
SERTULARIA ABIEGINA, p. 266.

a. Nat. size.

b. A portion, somewhat enlarged. From drawings by Mr. Tuffen West.

c. Calyces, magnified (T. H.).

d. The capsule (T. H.).



Tuffen West sculp.

W. West imp.

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PLATE LVI.

FIG.

SERTULARIA ARGENTEA, p. 268.

- a.* Nat. size. From a drawing by Mr. Tuffen West.
- b.* A young specimen.—*c, c'*. Calyces and capsule, magnified. From drawings by the Author.



Tuften West. sculp.

W. West. imp.

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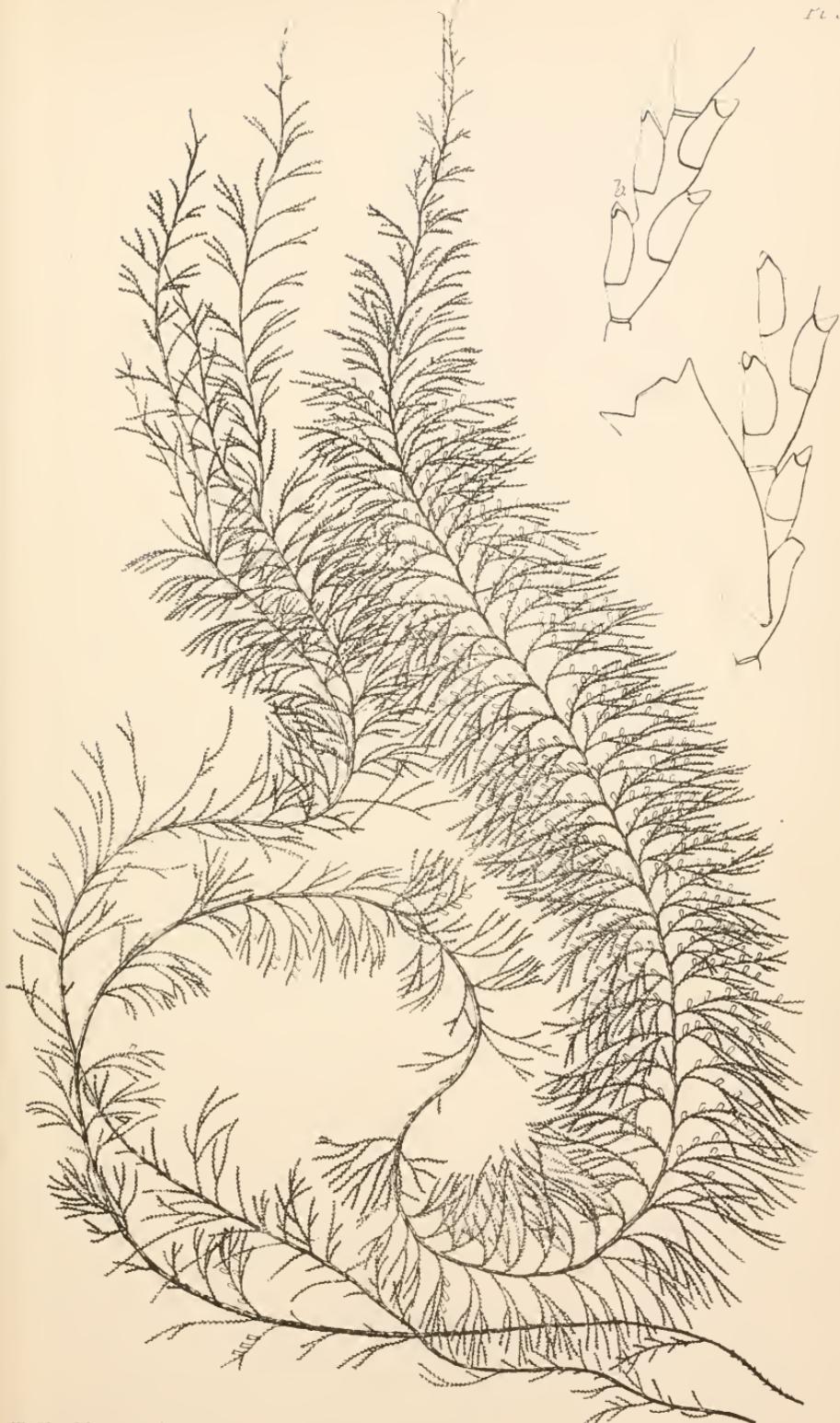


PLATE LVII.

FIG.

SERTULARIA CUPRESSINA, p. 270.

- a.* Nat. size. From a drawing by Mr. T. West.
- b, b'.* Calycles and capsule, magnified (T. H.).



Tiffen West. sculp.

W. West. imp.

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PLATE LVIII.

FIG.

HYDRALLMANIA FALCATA, p. 273.

- a.* Nat. size. From a drawing by Mr. T. West.
- b.* Calycles, magnified.—*c.* Calycles from a young specimen.—*d.* The capsule. By the Author.



Tuften West. sculp.

W. West imp.

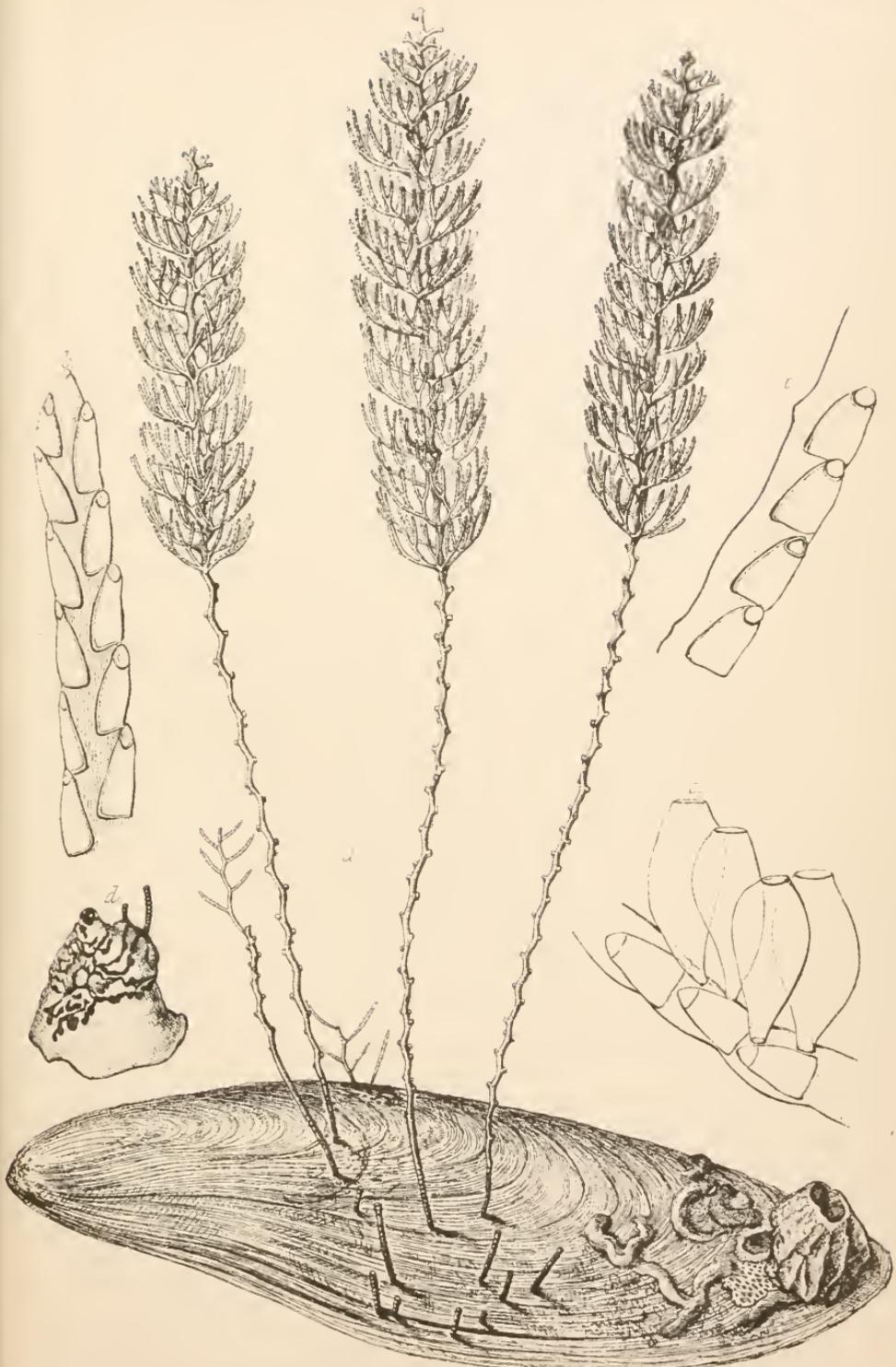
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PLATE LIX.

FIG.

THUIARIA THUIA, p. 275.

a. Nat. size. From a drawing by Mr. Tuffen West.—*b, b'*. Calycles, enlarged (T. H.).—*c*. A group of capsules, magnified (T. H.).—*d*. The crust from which the shoot rises (T. W.).



Tuffen West. sculp.

W. West imp.

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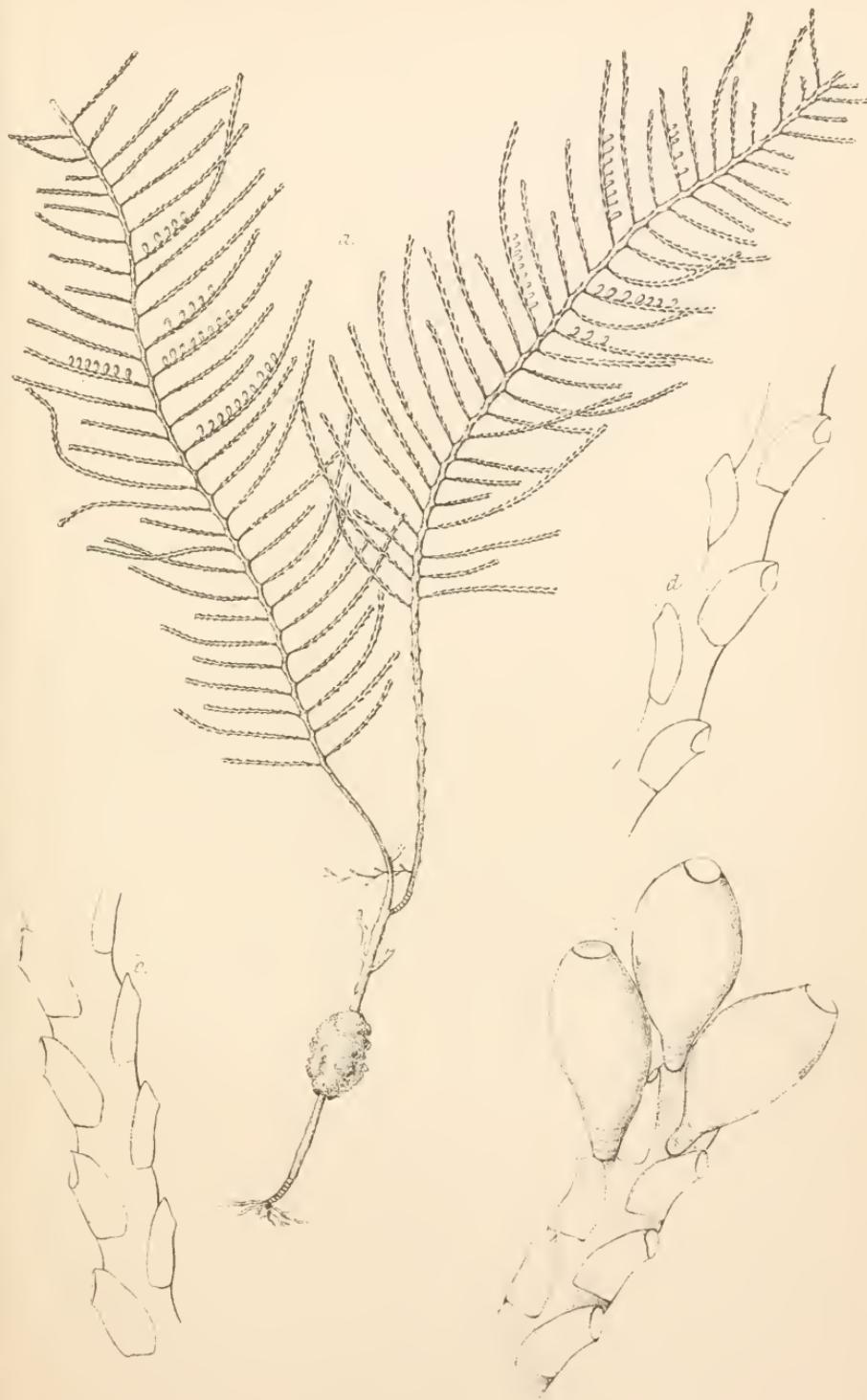


PLATE LX.

FIG.

THUIARIA ARTICULATA, p. 277.

- a.* Nat. size.—*b.* Calycles, magnified.—*c.* A group of capsules, magnified.—*d.* A portion of the stem of the Shetland variety. (*Vide* p. 278.)



Tufften West sculp.

W. West imp.

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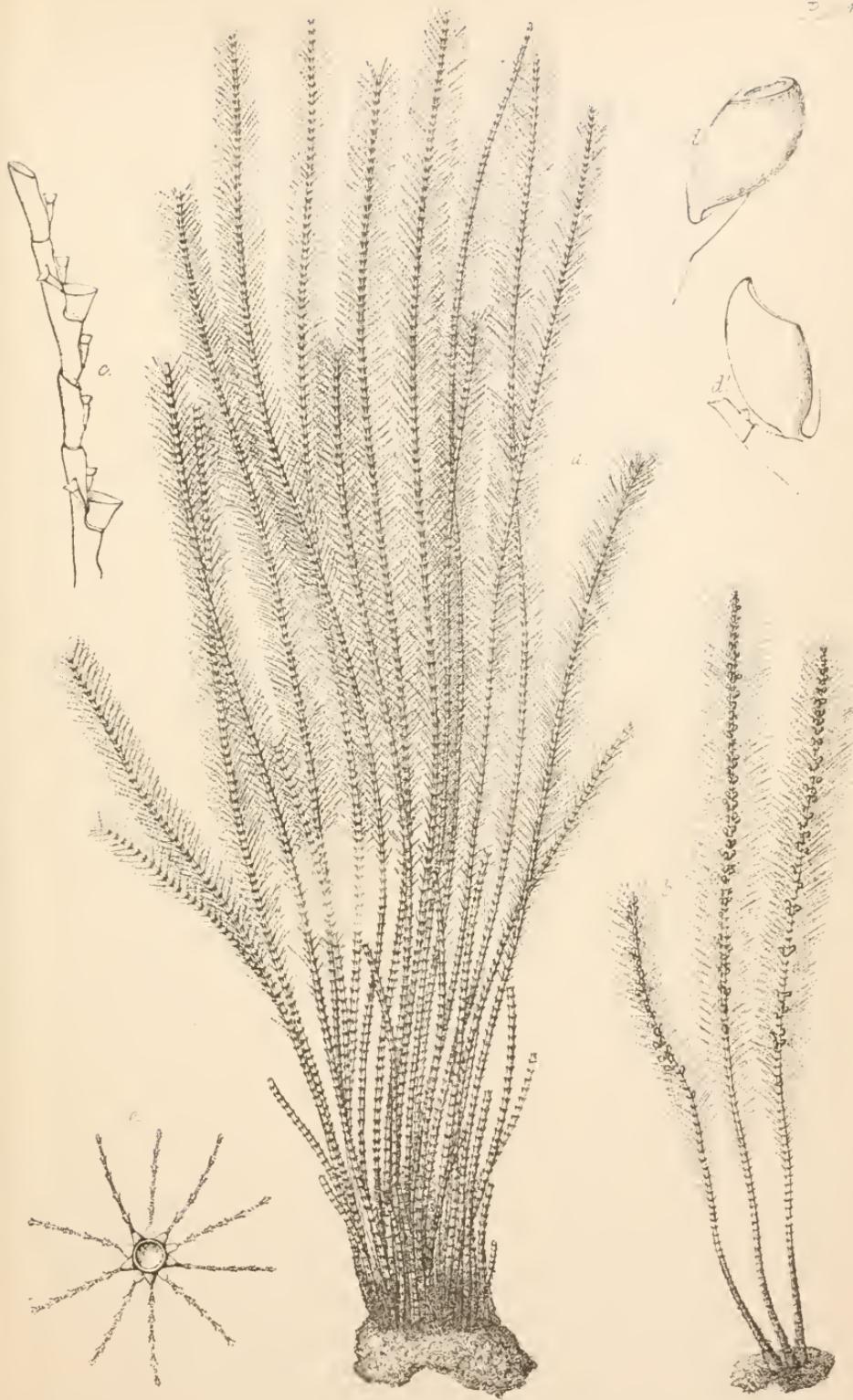


PLATE LXI.

FIG.

ANTENNULARIA ANTENNINA, p. 280.

a, b. Nat. size. From drawings by Mr. T. West.—*c.* A portion magnified to show the form of the calycles and arrangement of the nematophores (T. H.).—*d, d'.* The capsule (T. H.).—*e.* A section of the stem, showing the verticillate arrangement of the branchlets (T. W.).



Tuffen West. sculp.

W. West. imp.

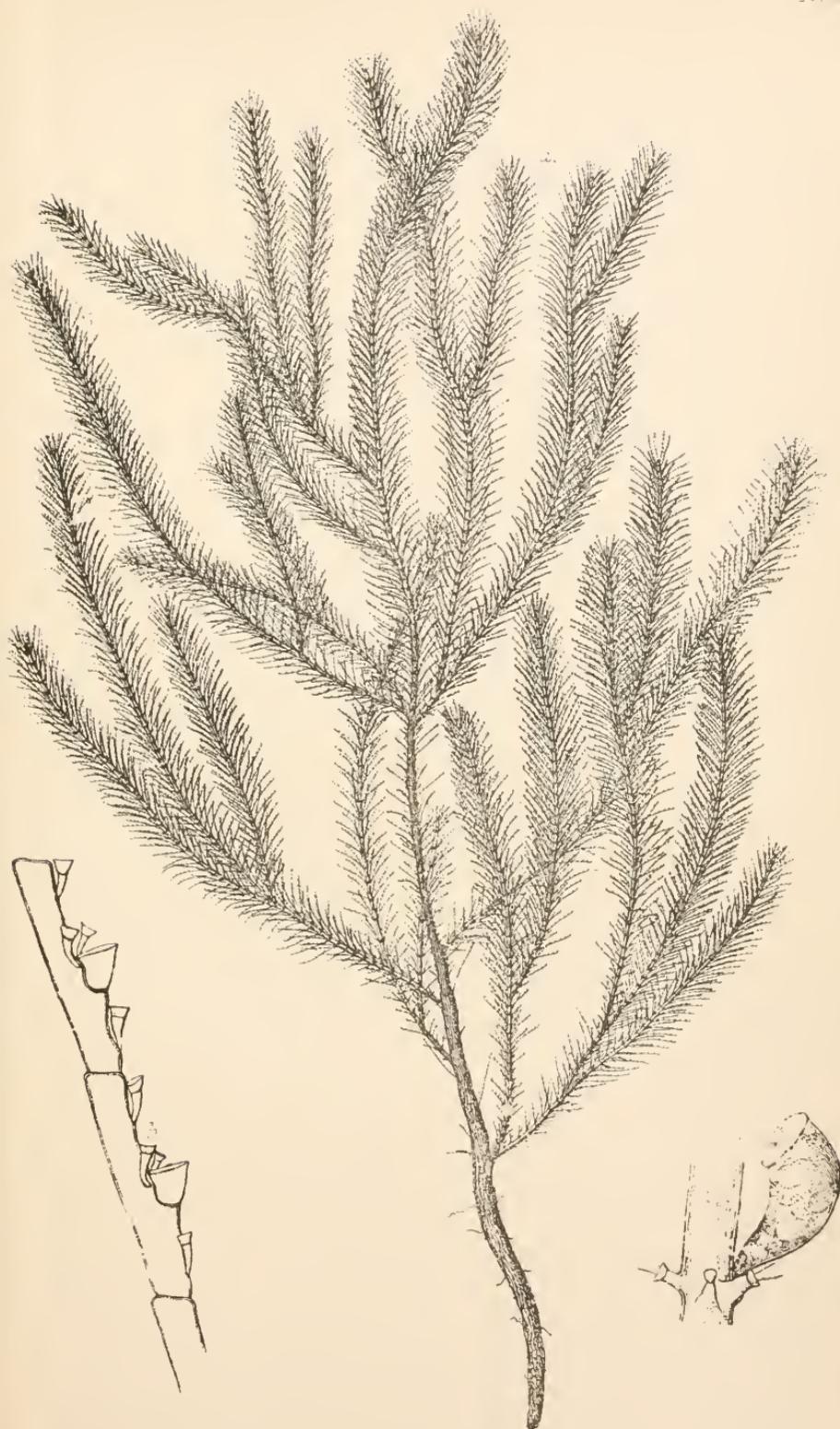
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PLATE LXII.

FIG.

ANTENNULARIA RAMOSA, p. 282.

a. Nat. size. From a drawing by Mr. T. West.—*b.* Portion, magnified (T. H.).—*c.* The capsule (T. H.).



Tuffen West. sculp.

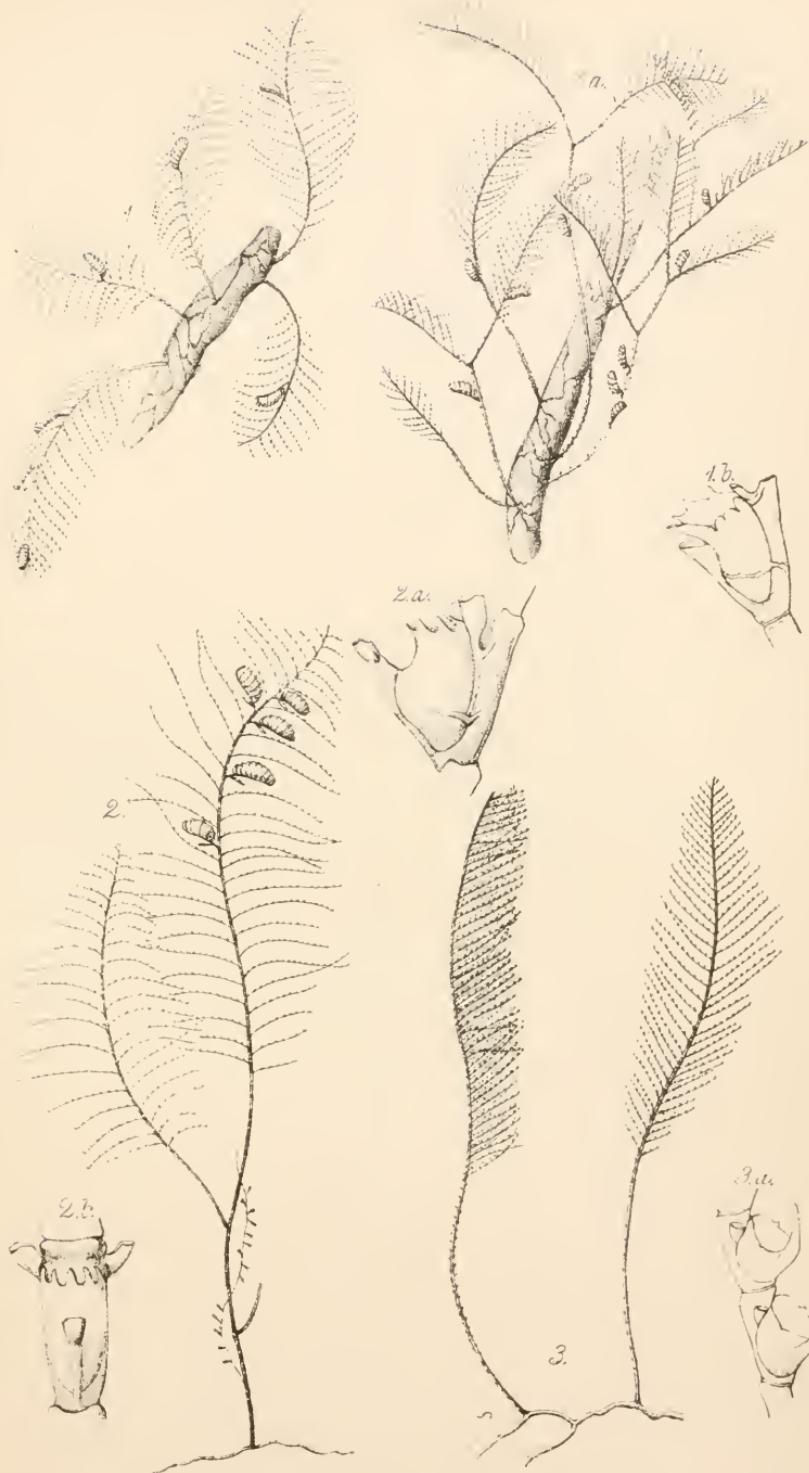
W. West. imp.

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PLATE LXIII.

FIG.

1. *AGLAOPHENIA PLUMA*, p. 286, nat. size.
- 1 *a*. *AGLAOPHENIA PLUMA*, var. β , nat. size. From drawings by Mr. T. West.—1 *b*. A calycle, magnified (T. H.).
2. *AGLAOPHENIA TUBULIFERA*, p. 288, nat. size. From a drawing by the Author.
- 2 *a*, 2 *b*. Side and front views of the calycle (T. W.).
3. *AGLAOPHENIA PENNATULA*, p. 292, nat. size.
- 3 *a*. Calycles, enlarged. From drawings by the Author.



Tuffen West. sculp.

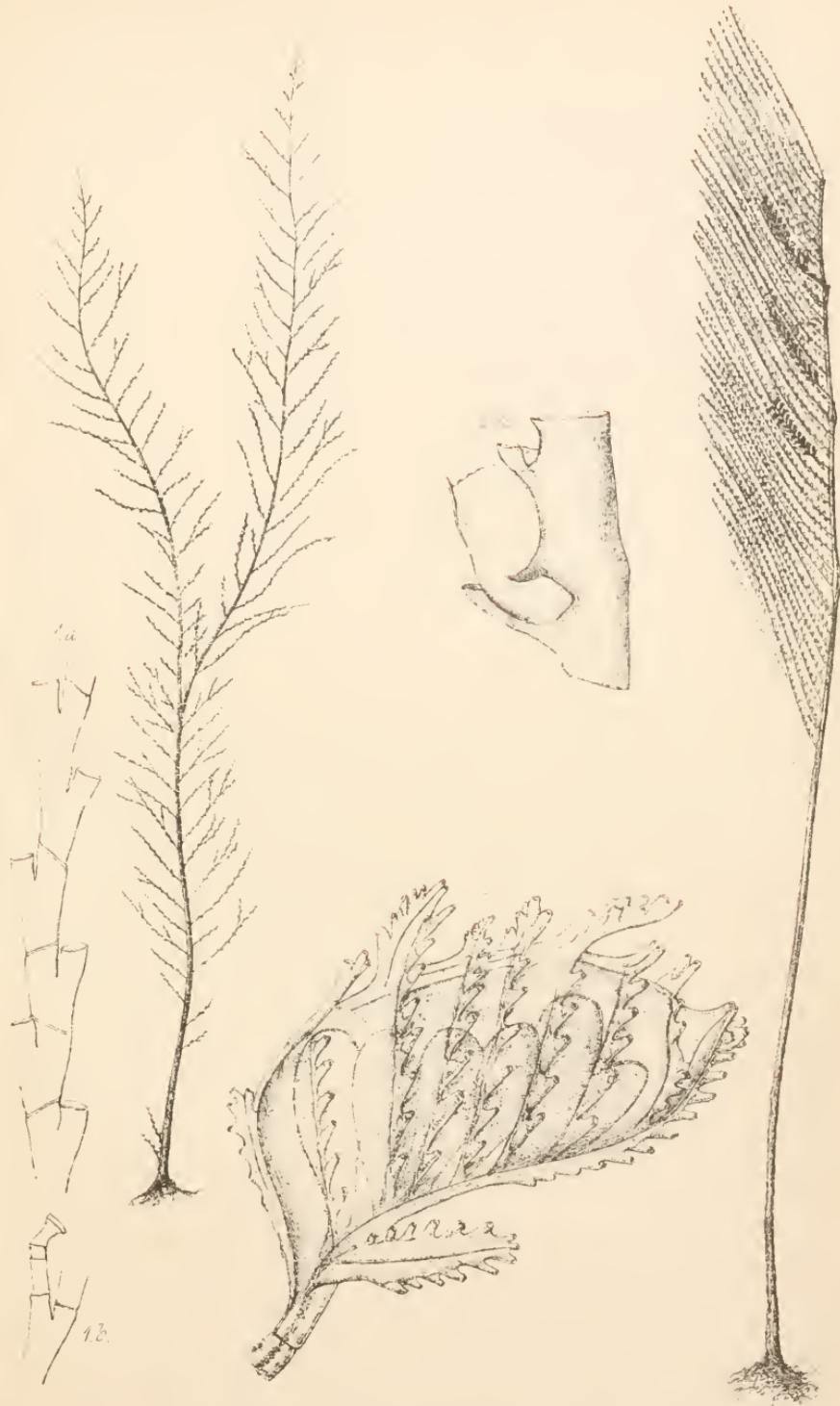
W. West. imp.

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PLATE LXIV.

FIG.

1. *HALECIUM PLUMOSUM*, p. 227, nat. size.
- 1 *a*. Portion, magnified.—1 *b*. A calycle, more highly magnified. From drawings by the Author.
2. *AGLAOPHENIA MYRIOPHYLLUM*, p. 290, nat. size. From a drawing by Mr. T. West.
- 2 *a*. A single calycle, magnified (T. H.).
3. The *corbula* of *AGLAOPHENIA TUBULIFERA*, magnified. From a drawing by the Author.



W. West. sculp.

W. West. imp.

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PLATE LXV.

FIG.

1. *PLUMULARIA PINNATA*, p. 295, nat. size.
- 1 *a*. Portion of a pinna, magnified.—1 *b*. Capsules, magnified.
2. *PLUMULARIA ECHINULATA*, p. 302, nat. size.
- 2 *a*. Stem and pinnæ, magnified.—2 *b*. A piece of the creeping stolon with capsules, magnified.
3. *PLUMULARIA SIMILIS*, p. 303, nat. size.
- 3 *a*. Stem and pinnæ, magnified.—3 *b*. Capsule *.

* This figure is drawn to a larger scale than the rest.



Tuffen West. sculp.

W. West. imp.

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PLATE LXVI.

FIG.

1. *PLUMULARIA SETACEA*, p. 297, nat. size.
 - 1 *a*. A portion of the stem and pinnæ, magnified, showing the axillary position of the capsule.
2. *PLUMULARIA CATHARINA*, p. 299, nat. size.
 - 2 *a*. Portion, magnified.—2 *b*. The capsule (female).



Tuffet West. sculp.

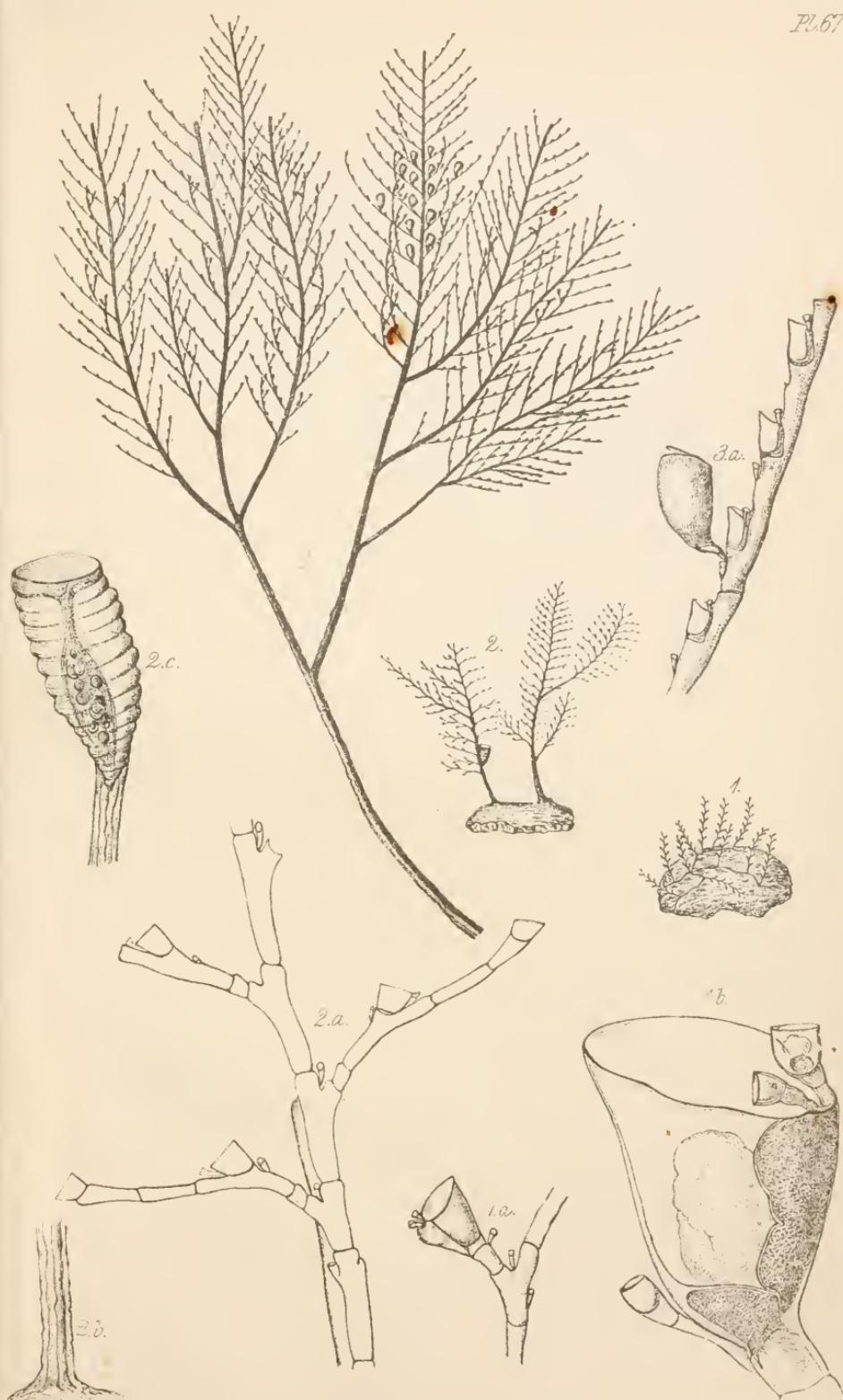
W. West. imp.

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PLATE LXVII.

FIG.

1. *PLUMULARIA OBLIQUA*, p. 304, nat. size.
 - 1 *a.* A portion of the stem, magnified, with a single pinna.
 - 1 *b.* A ealycle, more highly magnified. The last figure is from a drawing by Mr. Busk.
2. *PLUMULARIA HALECIOIDES*, p. 306, nat. size.
 - 2 *a.* Stem and pinnæ, magnified.—2 *b.* A portion of the compound stem.—2 *c.* The capsule.
3. *PLUMULARIA FRUTESCENS*, p. 307, nat. size.
 - 3 *a.* Pinna, magnified, with a capsule.



Tufsen West. sculp.

W. West imp.

